

# NON

# LOQUI





*San J. Morison.*

---

London Gazette:

August 19, 1768

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"The chairs in the park have lately been  
found extremely convenient for certain para-  
graph writers to set their wit upon."

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# NON LOQUI 1968



Non Loqui is the official journal of the  
University Engineers' Club.

*Editor:*

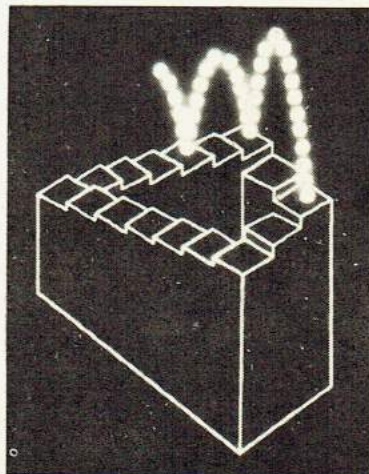
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# Editorial

For Australians today, communication out of fashion. It has lost its importance to average man in the street.

The Governor-General was quite correct when he said that Australia is a nation of mumblers. Foreigners find 'Strine' virtually impossible to understand even with a working knowledge of English.

Anyone who listens to the Parliamentary Broadcasts from the A.B.C. will acknowledge that even members of Parliament are both impolite and inefficient and in some cases almost incapable of communicating (especially when they speak of others' ineptness).

Australian Society is an affluent society. It is no longer an ideal to own a quarter-acre block - it is considered a right - though whether that right is fulfilled or not is a different matter. The upsurge of affluence has in turn erected the barriers of class that come from the type of car one drives or where one lives. The new affluence is steadily increasing the dependance of man on his technology while at the same time it is decreasing his dependance on any one particular man. The more a man has, the more he is afraid of losing what he has. He is more afraid of the man who has less. He allows his affluence to enclose him in his little box - it isolates him from other people.

The average Australian finds that communication is less and less important in developing his material standing. He has reached a stage where he is losing whatever ability to communicate he had before.

The most fundamental and ominous incapacity for our Average Australian is that of communicating with the people around him. Does it not seem strange that he can travel six miles in a bus and not say one word to the person sitting next to him. Witness the tragedy of next-door neighbours who never even speak to each other except to complain that their T.V. is always too loud. Nearly every widow and divorcee is lonely! Any doctor will tell you that. The simple action of communication is at least an acknowledgement of the other persons existence and unless everyone does just this, the social system begins to crack.

What does this mean to an Engineer? We are told that we must be able to communicate with our fellow engineers. I think that more is necessary, for we are also told that we will have to deal with people as well. This means that we have to recognise them as people not just as things. There is precious little training for this in the course as we know it.

Since it is almost impossible for much more formal teaching in the course, it must be done outside. It is not hard. In fact it is just going to a person or talking to a person and letting him talk to you.

This is not only fundamental to the handling of people - it is fundamental to the continuation of a sane society.



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# Obituary

Mr. Graham John Rock, temporary Lecturer in the Department of Mechanical Engineering, was tragically killed in a car accident near his home late in March. He was awarded first class honours in mechanical engineering in 1963, having won the Convocation prize in Engineering in 1960 and the Metal Industries' Association Prize in 1961. Awarded a Gledden Research Fellowship in 1964 he accepted a temporary Lectureship in 1965. At the time of his death he had nearly finished work on his Ph.D. research project which was concerned with the stability of wheeled vehicles - work which unfortunately will now be difficult if not impossible, to complete. His widow and three small daughters, his many friends and his colleagues all sadly miss his cheerful companionship.

D.J. Allen-Williams



**U.E.C. COMMITTEE** *(till May 1968)*

*P. Nicholson, R. Grieve, G. Lievers, R. Dimond, G. Rafferty*

*C. Poynton, P. Hopwood, R. Gunn, (President) I. Morrison K. Walters.*



**U.E.C. COMMITTEE** *(2nd and 3rd Term)*

*D. Cousins, R. Spence, C. Poynton, W. Combs, R. Dimond,*

*D. Burville, I. Morrison (President), A. Smith*



# President's Report



Dear Members,

In keeping with tradition I have endeavoured to sum up yet another successful year for the U.E.C.

In at least one respect 1968 is unique in the club's history with two groups of final years sitting for exams; the last of the five year courses in June and the first four year course in November.

Once again Engineers set the pace when the social season got off to a flying start with the tremendously successful 50th Annual Ball - a fitting success for all those members who put in so much time and effort.

The Guild elections at the end of last year brought further prestige for the U.E.C. with the move of three of its members into the upper echelons. Dave MacKinlay as Guild President, Jeff Crow as Societies Council Vice President, and Godfrey Lowe as Guild Welfare Officer on Guild Council.

1968 was also the year for the Science and Engineering Exhibition. Overall this was a huge success but unfortunately the running of the Engineering section was left to the few stalwarts of the club. While it was heartening to see first and second years joining in it was disappointing to see the meagre response from final years.

On the sporting side 1968 marked the return of the Goyder Cup to Engineering after many years of absence. This was brought about by a strong club spirit which also resulted in many spectators turning up and giving vocal support. There is also a rumour that incentive beers may have had some small bearing on the result.

In conclusion I would like to thank the Patron and Vice-Patrons for their support of the club and the members of both committees which have held office during the year for their co-operation and hard work.

*Ian J. Morrison*



# SYMPOSIUM



The 1968 E.F.B. symposium was held in Hobart from May 19th to May 29th. The West Australian delegation arrived by air on the 19th and were accommodated in Christ College, approximately half a mile from the University campus. It was on the summit of a hill which was no doubt the origin of many gasping drinkers after a long hard day!

The Symposium itself started on the Sunday night of the arrival with an informal welcome at the Elwich Show Grounds. The Official opening took place on the following morning and was conducted by Mr. G. Hean, chairman of the Tasmanian division of the Institution of Engineers. In addition two delegates from each state were given a civic reception by the Lord Mayor of Hobart.

The first paper was presented in the afternoon by the Hon. R. Fagen, Deputy premier, Attorney General and Minister for Industrial Development. His topic was 'The Tasmanian Economy' through which he emphasised that while Tasmania was the smallest state in the Commonwealth, and was of rugged nature, it had overcome its population difficulties by use of its major natural resource, Hydro-electric Power. He also mentioned the recent development of iron ore mining in the north of the island. The ore retrieved was of low grades (Magnetite) but was nevertheless an economic proposition. The lecture was concluded with a film on the Gordon River Road. It demonstrated the immense difficulties encountered in the rough back country.

That evening, a cabaret was held at the Carlyle Hotel. A good time was had by all concerned. Bev Harrel sang to add to what was already a classy show.

Tuesday morning's lecturer was Professor Oliver of Civil and Mechanical Engineering. He spoke to the symposium about 'Cunning Engineers of the Past', which was very much in line with the overall theme 'The Ingenious Engineer'. He started with the Egyptian engineer Imhotep and covered engineers through to the present day. This lecture was quite amusing in parts and was thoroughly enjoyed by all those who managed to attend.



The afternoon lecture was presented by Mr. J. K. Wilkins, Civil design engineer with the Hydro-electric Commission. The topic was 'Originality in the Design and construction of Dams' which dealt mainly with thin arch dams, a form used extensively in the Mersey- Forth Scheme in the North of Tasmania.

The 'Cartela', a converted fishing trawler carried three hundred Engineers hockey birds to Bruny Island. It also carried a few gallons which, though consistently attacked could not be depleted during the five hour trip. A barbeque was held on the island in complete darkness followed by an exchange of songs with the hockey birds. Hobart's only band gave patrons an excuse to stagger whilst a bird threw herself headlong down a flight of stairs. This caused less disturbance than a bloke who pushed into a queue for the conveniences.

Wednesday was the day of tours.

The Gordon Road tour was a trip of about one hundred miles along the road to the Gordon river dam site. The power capacity of this scheme will be nearly the same as that of the Snowy Mountains Scheme. At first, access was impossible but the Commonwealth Government gave Tasmania \$5,000,000 to construct a road for the region.

The road trip was made in two buses kindly loaned by the Hobart Hysterical Society. Rain and frequent stops for 'scenic appreciation' followed the half hour at the National Park Inn. After a brief inspection of the site, the clutch of one of the buses packed up, and the bus, being stuck in second gear had to be manually rotated. Finally it was left on the track and all piled into the one bus. This made rapid trips down the corridor impossible so the windows were utilised.

Although Ian had primed himself on a bottle of vodka, his effort to chunder out the window was eclipsed by a Sydney Engineer. An even further interrupted trip saw the bus reach town three hours late.

'Enginuity or Folly' was the title of a paper presented on Thursday morning by Mr. L.A. Enderslee, Group Engineer, Civil Design of the Hydro-electric Commission. It was an illuminating account showing how an Engineer's ideas can get out of hand, using the case of the collapse of the Viant Dam in Italy.

The one forum held during the Symposium was around the subject of 'Air Pollution'. Members of the panel, all prominent in city engineering and planning attempted to throw light on a problem which Australian's should be looking at very closely.....now.

The main events of the week were undoubtedly the Symposium Ball and Dinner held on the Thursday and Friday nights.

R. Dimond

I. J. Morrison



*Rugged country near the  
Gordon River Dam Site*

# FLUIDICS

**Eureka!**", an exclamation that conjours up pictures of Archimedes running down the street with towels flying when he finally figured out that the upthrust was equal to the bath water he displaced while lying back and contemplating. Coanda made his discovery under the shower a millennium or two later, but did not give the same show as his predecessor. The Coanda effect occurs frequently around the home, and one example is the shower. If you stand under the shower with an arm by your side, and then slowly raise it through 45 degrees, you will notice that the water does not just pass over the surface and drop to the floor, but will run down the length of your arm before separating and falling to the floor as a continuous stream. It also strikes the unwary in the kitchen, when, on that odd occasion, you happen to be pouring a glass of milk from a bottle, the milk runs down the side of the bottle ending up everywhere except in the glass.

Basically the Coanda effect is the attachment of a stream or jet of fluid to a wall. Consider the free jet shown in Fig. 1.

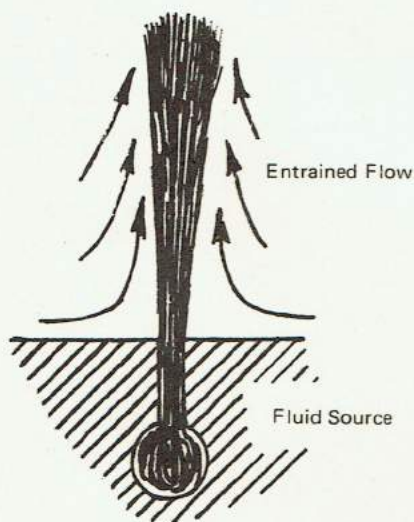


Fig. 1

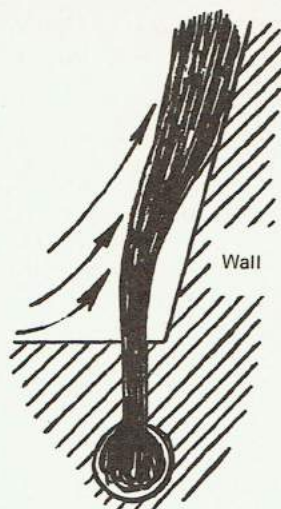


Fig. 2

As the jet passes out through the nozzle it entrains the surrounding stationary fluid due to the turbulence at its edge. If a wall is placed near the nozzle and slightly inclined to the axis of the jet, the amount of fluid entrainment is severely reduced because the flow which would normally replace it is severely reduced. This causes a low pressure region to be formed between the jet and the wall. The pressure gradient from the ambient conditions to the low pressure "bubble" deflects the jet onto the wall and holds it in a stable position.

Henri Coanda used the effect to improve the scavenging in an internal combustion engine in 1930's but it was not until the late 'fifties' when a U.S. Army Laboratory picked up the idea, that it was really applied. The Harry Diamond Laboratories working in military fields could afford to investigate this field where the advantages outweighed the initial cost. They applied the Coanda effect to a small device known as a fluidic flip-flop. The flip-flop, as its electrical counterpart is a bistable logic element, that is, only one of two outputs can be on at any one time. A fluidic device uses a fluid, commonly compressed air, as the working medium instead of electrons.

The fluidic flip-flop consists of two inclined walls, one on each side of the fluid jet. The jet can attach to either one of these walls as shown in fig. 3. In addition it will remain there, so it is "bistable". A splitter is placed between



the walls to separate the two outputs so that each may be used separately. To switch the output from one channel to the other, control ports are placed in each inclined wall adjacent to the nozzle. A small pulse of fluid from one control jet will increase the pressure of the "bubble" until the jet is forced over to the other wall as shown in fig. 4.

The fluidic flip-flop is just one of the many elements now available to the control engineer for use in fluidic logic circuitry. Fluidics is being used in an increasing number of fields as a supplement to electronic control systems, particularly in areas of heavy radiation, severe vibration or high temperatures. Control of naval boilers, diesel-electric locomotives, bottling plants, space craft, car crushing machines, respirator equipment and cyclic production machinery are some of the various applications in which these simple elements have been applied.

They are simple. A pure fluidic device has no moving parts and so nothing can be worn out by friction. They have been made in ceramic materials and used in temperatures up to 1400 degrees C. They can also be made extremely small as in the case of a 14-bit counter that occupies one third of a cubic inch.

Fluidics is a rapidly expanding field and its application in some Australian industry imminent. To quote Victor Hugo, "No army can withstand the strength of an idea whose time has come."

T.W. Riley  
Mech. IV

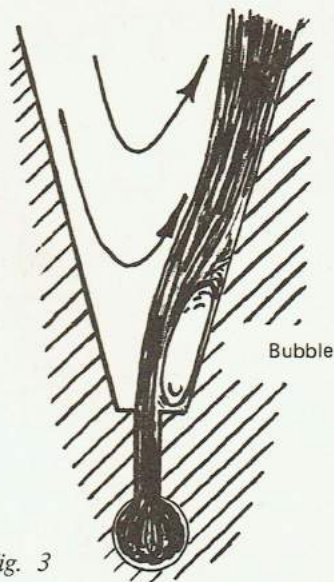


Fig. 3

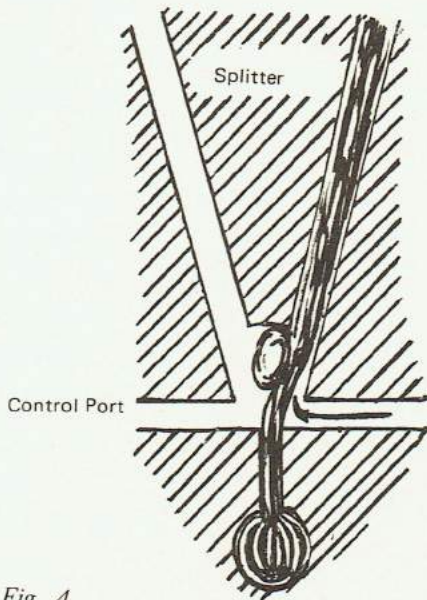
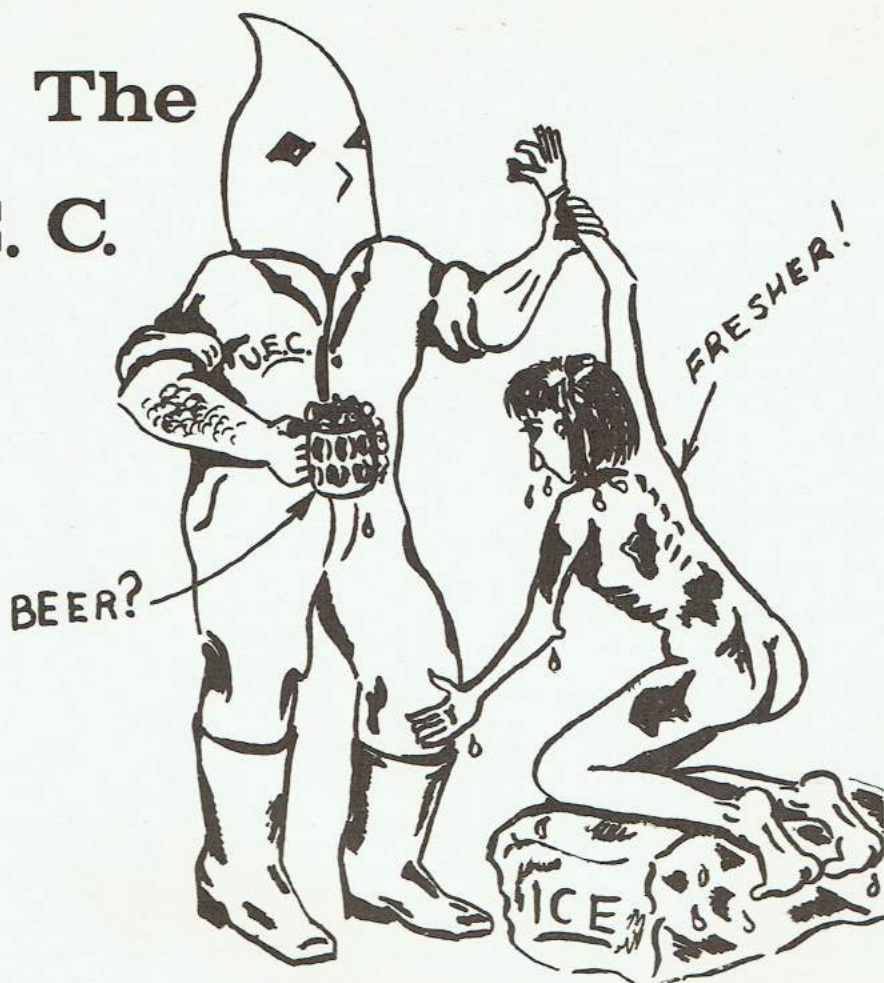


Fig. 4

# On The U. E. C.



It seems that we have been left behind by the march of Time. The year is 1968, and yet we are still proudly projecting the Image of the Greaser. This truly remarkable symbol has been with the Club since its inception and generations of Engineers have been nourished on its noble principles. Why anyone should choose a greaser for an Ideal on which to model themselves, I do not know, because, when it is all boiled down, a greaser is nothing more than an enlightened mechanic.

There is, however a certain mystique attached to the Greaser Philosophy - a type of 'let's get stuck into it' attitude which, is designed on the whole to impart a feeling of omnipotence. The Philosophy finds expression in the Club motto - 'Non Loqui sed Facere' (not to talk but to do), and in the song 'We are the big

strong silent men who do not talk but do things'. The banner assists the Image with its portrayal of three vices, (drinking, smoking, and gambling) and three spanners (mechanics always have spanners). It is interesting to note that even when the banner was promulgated, drinking was the paramount pastime of Engineers: hence its dominating position on the banner. Even more interesting is the omission of what today is a flourishing vice-second only to drinking in importance. One wonders whether it was regarded as too hot to handle or whether it was unknown to the Engineers of those days. The latter is a distinct possibility since the original Engineers were well isolated in one corner of the Site and they seemed to suffer from a overwhelming inferiority complex. Indeed, it is probable that the Greaser Image was instituted to over-come such feeling of inferi-



ority: and who can doubt its success? Its so very good for the ego that it has caused us to become the biggest band of tub-thumpers and trumpet-blowers (after the Lawyers, of course) at this University. It's all very quaint and not a little archaic.

But it does have some advantages. It allows the ritual of initiations to be held annually. Most other Faculties seem to manage quite well without them these days (again the Lawyers are an exception) but this is not for Engineers! Each year we go into earnest conference to see what diabolical pleasures can be arranged to welcome the new flock to the fold. To say that they are fleeced is an understatement - they are led (to coin a phrase) like lambs to the slaughter. Significantly, it has been necessary to change the abattoir at frequent intervals.

Now all this is slightly amusing, but it should not obscure the observation that it is also, to a large extent, outmoded. There are two ways to correct the situation and bring the image of Engineering up to date.

The first alternative is to keep the Greaser and bring him up to date. This would mainly entail the acknowledgement of that vice so unfortunately omitted from the present banner. I would suggest that the spanners be deleted and the silhouette of the naked female form be included in their place. Thus we would have the complete array of the legendary Engineering pastimes prominently displayed - although at the rate the cards have been disappearing from the Common Room it may become necessary to exclude gambling. The loss of the spanners might cause some temporary distress (especially among Mechanicals) but I am sure that we could withstand that - considering the consolation offered in lieu. Nevertheless there might still be some difficulties, because with the growing use of air, hydrodynamic and magnetic bearings, lubrication mechanics could become an extinct species.

The other alternative is to dump the Greaser altogether.

**HORROR!!! SHOCK!! DISBELIEF!!**

This suggestion will probably cause me to be tried for heresy; but since burning at the stake

is no longer fashionable I am prepared to take my chance. The whole trouble is that the good old greaser Philosophy is no longer truly valid. Yet we are still flinging it around triumphantly. For a start, our motto denies a basic function of the Engineer. An Engineer must talk! Unless he can communicate, discuss, consult, instruct, persuade, he is useless; just as useless as if he were unable to do! Don't forget that Engineering is one of the few professions that have a direct and profound influence upon the environment in which we live. This is a formidable responsibility.

Blind action will not suffice if we are to discharge it properly. It might, in fact, be better to change the motto to "Loqui et Facere".

Then, of course, there is the song...famous for its remark about "big strong silent men" etc. While this may not be strictly accurate it is passable - after all we do need something to raise ourselves from depression. It's a pity, though, that the Civils (who are usually our most vociferous choristers) insist on singing the tune incorrectly. Perhaps the Captain of Songs could hold some lessons.

However it is not the singing that is the real problem but the initiations. Of all the Greaser anachronisms, none stands out quite so ridiculously as the initiations. It is very difficult to find any justification for them in a club like the U.E.C. where membership is compulsory. After all, the prime purpose of the initiations is to foster unity, but with our membership system and the perpetual lack of 100% attendance at them, they cause only division within the Club: and this is something we cannot afford. To persist with initiations would be unfortunate but if they are continued, they must be made voluntary - because membership of the U.E.C. is compulsory. If a person has no choice but to join the U.E.C., then the Club has no right to demand that he attend initiations. And for this very reason, the institution of sanctions against those who fail to attend is totally indefensible.

The U.E.C. is now 47 years old. We are overdue for a spring-clean.

**G. BINCKES  
Mech. III**



# S.C.I.I.A.E.S. Again !

---

After a tortuous security check at the entrance to S.C.I.I.A.E.S. headquarters I was escorted down a long grey corridor and ushered into the presence of M-section-head of this world-wide criminal organisation. It was in this small sunlit room that the leering M told me of the most dastardly crime perpetrated this century.

The agents who carried out this blasphemous deed still walk the streets as free as you or I, undetected by the constabulary - who are fighting a losing battle to eradicate this evil band.

M with a sneering grin told me the following story:-

After much planning the agents 001, 002, 003, 004½ departed from headquarters in 001's sports fastback, Offenhauser powered, bullet-proof G.T. FB with twin-merlin ejector-seats - POW!!! Not many minutes later they arrived, with their complex equipment, at the picturesque resort which holds Perth's rival to the Blarney Stone - deep in the heart of G.E.O.L. country. (Editor's Note. G.E.O.L. a smaller somewhat less notorious criminal band headed by "Rex the Wonder Dog".)

Silently and swiftly they carried out their evil deed - ZAP!!! In no time at all the rock was white (one coat of Dulux Full-Gloss-20 years guarantee) and as a parting gesture flaunted their insignia in bold black paint to complete their most horrible violation of one of natures wonders.

However, a G.E.O.L. agent, disguised as a feldspar phenocryst was unearthed, in the kaolinised zone taking incriminating micro-film and he was dealt with in the usual S.C.I.I.A.E.S. manner-ZAP!!POW!!ZOWIEEE!!!

At this point M offered me copies of this film - see enlarged pictures above. The first was taken by the G.E.O.L. agent and the second - a warning to any G.E.O.L. men caught by this organization - was taken by a S.C.I.I.A.E.S. man during the process of decreasing the G.E.O.L. membership - a popular pastime with S.C.I.I.A.E.S.men.

With a nod M concluded the interview and with trembling limbs I found myself once more outside the Reid Library and hence to the coffee shop - where black coffee washed away the nauseating trembliness of my stomach.

These are dangerous men and will never be taken alive - so my warning to all you honest citizens is beware of the sign of the lily.



*A dastardly deed*





*A delightful necessity*

*Editor's Note: This report and microfilm were taken from the body of the Late Fergus O.Toole, former ace Non-loqui reporter which was found encased in a 40ft x 72ft one-way concrete slab (full structural details available on request) at the bottom of the Reflection Pond.*

SIMPLIFIED AUSTRALIAN STANDARDS	SIMPLIFIED AUSTRALIAN STANDARDS	SIMPLIFIED AUSTRALIAN STANDARDS	SIMPLIFIED AUSTRALIAN STANDARDS
BY	BY	BY	BY
RASH PADDOCK	CRASH PADDOCK	CRASH PADDOCK	CRASH PADDOCK
VOL 392	VOL 393	VOL 394	VOL 395
TYPES OF LINES	INDEX TO VOL 392	LENGTH OF ARROWHEADS PART I	LENGTH OF ARROWHEADS PART II
ELEMENTARY TEXTS			

# A Graduate Looks Back

The design of a specialist University course leading to professional qualifications demands close attention.

The place of technical and applied scientific disciplines in an "ideal" University is somewhat tenuous. One finds it difficult to reconcile the concepts involved in the preparation of students for specific professional careers with the notion of "learning for its own sake".

In the Australian context, learning, *ipso facto*, is regarded with contempt - a man who cannot, after four years at University, turn his hand to something practical is considered "too theoretical" and hence of limited value both as a person and an employee. The "consumers" of professional graduates (i.e. employers in Industry) demand men who are rapidly employable. The dependence of the University on support from Industry and Commerce increases the likelihood of such groups dictating the academic policy of Faculties.

One must concede that since Engineering is catered for by the University, the course must provide for the teaching of some detailed practical techniques. At the same time the function of the "ideal" University must be recognized and attempts made to design courses that expand the mind, extend the awareness and encourage the use of reasoned judgement.

A compromise must therefore be made - the demands of employers for highly trained technical experts must be balanced with the demands of the University to maintain its ideal of seeking wisdom. Engineering Courses must firstly provide the background in mathematical and physical sciences, secondly provide coverage of the approach to, and the techniques of, engineering problem analysis, thirdly create an awareness of the development and current implications of technology and fourthly encourage a lively interest in social and political issues.



David MacKinlay was elected to the position of President of the Guild of Undergraduates for 1968. He is the first Engineer to be elected to this position for some years. Also in 1968, he passed his final exams for the degree of Bachelor of Engineering

If one could generalise and attempt to assess whether or not the courses at the moment are fulfilling these four provisions, one would inevitably conclude that little time is devoted to considering the implications of technology on social and economic development and that little opportunity is available to students for involvement in social and political issues.

The basis for two criticisms of the present engineering courses that are most valid are:

- (1) the degree of specialisation in detailed areas, and
- (2) the lack of time free from formal course involvement.

The specialized courses offered in engineering tend to disclose the failure to recognize the fact that there is a limit to the amount of information that can be covered in any four year course.

More emphasis should be placed on methods and underlying principles and less emphasis on detailed techniques. Employers should be prepared to undertake the specialised training of engineers, secure in the knowledge that the graduate has an active and lively mind and an interest in not only engineering, but also economics, politics, psychology and the arts.



The lack of time free from formal course commitments is a problem felt acutely by first and second year students in particular. No time is available for participation in the Guild and club activities, or for the free mixing and discussion with students of other disciplines. In this way the present courses prevent the pursuit of free enquiry and tend to produce engineers soundly trained in a specialized field yet unable to reasonably approach problems in other areas. The concept of broadly trained mind is thus sacrificed in the name of technical advancement.

It is important for two reasons that some re-thinking of engineering courses is undertaken. One reason is the need to produce engineers who are imaginative and able to tackle the serious problems of industrialization, urbanization and the dearth of energy supplies - the kind of problems that involve social and econo-

mic factors as well as technological considerations.

The second reason is a political one. Unless the University can demonstrate that its Engineering courses are clearly producing superior graduates to those of the Institutes of Technology the University will fail to attract sufficient support from Government and Industry. The Commonwealth and State Governments are attempting to gain considerable political capital by planning to divert money, formerly available for University development, to the Institutes of Technology and Colleges of Advanced Education.

Vigilance is required if the School of Engineering is to be able to effectively maintain its existence and produce the kind of graduates that the State needs.

D. MacKINLAY  
Mech. Graduate 1968.

---

### Advertisement

## AFTER GRADUATION WHAT?

As an engineering student in the University of Western Australia you may already be a Student Member of the Institution of Engineers, Australia, the scientific-technical body of the profession which advances the practice of the profession and maintains standards of engineering education and training.

After graduation, followed by an appropriate period of experience, you will become eligible for Corporate Membership of The Institution of Engineers, Australia, and entitled to the designation "Chartered Engineer (Australia)", a title protected by law.

However, upon completion of the examination requirements for your degree you will be seeking employment which will give you this experience (and earn you a living).

In this and subsequently you will find membership of The Association of Professional Engineers, Australia invaluable.

A.P.E.A. as the industrial organisation of the engineering profession in Australia, is concerned with negotiations for salary and conditions of employment.

A.P.E.A. and The Institution, while having their separate and distinct roles, work together harm-

oniously in maintaining and advancing the standards and status of the engineering profession.

As a Qualified Engineer, you will be entitled to a minimum salary of \$3,614 per annum in the terms of the national award achieved by A.P.E.A. through the Commonwealth Conciliation and Arbitration Commission.

Subsequently, for Chartered Engineers, the minimum salary is \$5,043 per annum.

Action to have these figures increased is currently before the Commonwealth Conciliation and Arbitration Commission.

A.P.E.A. admits to its membership employee engineers who hold academic qualifications recognised by The Institution for admission to its Graduate or Corporate Membership.

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# STAFF !

look how much hair  
you had then....

feel what you have  
now....



# WHO'S WHO

## On The Staff 1968

Who are your lecturers?

Where do they come from and what experience are they drawing from when they lecture to you. Here is a collection of brief notes about the staff. As well as answering the questions above, they tell you what their interests are and what their research work is about.

*The editor acknowledges the help received from the staff in the compilation of these notes, without which the task would have been impossible.*

### Civil

*Professor K.L. Cooper*

Studied at this University for his B.Sc. in 1927 then went on to Oxford University as a Rhodes Scholar to complete a B.A. in 1929 and a M.A. and B.Sc. in 1933. He is a member of the Institution of Civil Engineers and the I.E. Aust. He has worked for the British Ministry of Transport, the W.A.G.R., Tasmanian Railways, and became a lecturer in civil engineering at the University of Melbourne in 1940. In 1945 he became the Principal Research Officer with the Division of Forest Products, C.S.I.R.O., Melbourne and then in 1953 was appointed to the chair of Civil Engineering at this University. He was a member of the University Senate from 1963 to 1966.

*"Of course 1/3 of you won't pass this year"*

*P.C. Massey (Reader)*

Has the academic qualifications of B.E. (hons) and B.A. from the University of W.A., and Ph.D. from Cambridge. He was on the staff of the University of Canterbury, Christchurch, New Zealand, for some years before returning to W.A. in 1955. His main interests are in Structural Engineering with emphasis on Structural Engineering Mechanics. Currently he is studying stability problems.

*Solves 'DE's in his head*

*J.R. Espie*

Graduate from this University in 1935 and from 1939 - 1945 attained the rank of Captain while on the General List B.E.F. attached to the Royal Engineers serving in Malaya and India. Lecturing at this University since 1947, he has been head of the Civil Department and was Dean of the Faculty in 1953. He is a member of the I.E. Aust. Being in charge of the Testing Laboratory, he is mainly concerned with Materials Testing.

*"We can't do it"*

*B. Clegg*

Having received a B.E. from this University in 1946 and further training in soils engineering from the Melbourne Board of Works he worked in Melbourne and W.A. for the Commonwealth as a Soils Engineer. After being employed overseas in London and Canada he returned to Australia to work with the Snowy Mountains Hydro-Electric Authority until 1956 when he joined the University Staff. At present he represents W.A. on the Australian Committee of the Society of Soil Mechanics and is Chairman of the W.A. State Committee of Water Research Foundation. He has been Sub-Dean of the Faculty of Engineering for the past two years and earlier this year was awarded his Ph.D.

*Doctors sick soils nowadays.*



*B.G.A. Smith*

Having obtained a B.E. with Honours from the University of W.A. in 1948 he worked with the Department of Works in Melbourne from 1949 to 1954. In 1952 he became an Associate Member of the Institution of Engineers, Australia. He became Engineer in charge with a firm of Architects and Engineers in 1954 and worked on large scale industrial projects. He then worked with another firm of Architects where he did similar work including multi-story city buildings. He was then made Engineer - in-Charge, Structural Division of Bouchers Industries in Perth, responsible for all activities of a division fabricating structural steel work and prefabricated buildings. He commenced lecturing at this University in 1960 in Drawing and Design. On leave in 1966, he spent six months at Berkeley University in California and a further six months in London and on the Continent. During this time he was engaged extensively on timber research.

*Believe the initials stand for...Be Gone All day*

*R.H.B. Hebbert*

Received a B.A. Sc. from University of British Columbia in 1955 and obtained a M.Sc. in Hydraulics from Queen's University, Canada, in 1959. Before coming to W.A. in 1963 he lectured at the University of Alberta. His current interests are in hydraulic transport of solid materials and hydrology.

*"Waal, yes....I guess this is so"*

*J.H.B. Matthews*

Graduated with B.E. at University of W.A. in 1961-62. Since graduation he spent 2 years as a design engineer with D.H. Fraser of Perth, approximately one year with the engineering section of Hobbs, Winning and Leighton of Perth and approximately one year with Ove Arup and Partners of London. He joined the staff in January 1966 and since then has pursued his interests in the field of reinforced concrete.

*Very suave - drives a TR2000*

*G.R. Morgridge*

Having graduated from the University of W.A. in 1964 he worked with the Main Roads Department for one year on road construction before being appointed Senior Demonstrator at this University in 1966 and Lecturer in

1967. His main interest is in the field of Coastal Engineering - in particular the transport of sediment due to wave motion.

*Never seems to know where the minus sign comes from*

*H.S. Craddock*

After graduating from the Sydney University with degrees in Mechanical and Electrical Engineering, he spent several years in industry in Sydney, Melbourne, Newcastle and Wollongong. Since then he has been teaching mainly Mechanical Engineering, firstly at the Wollongong Technical College followed by the Sydney and Newcastle Technical Colleges. Following this, he lectured at the Newcastle University College, the N.S.W. University of Technology and the University of N.S.W. He started lecturing in Drawing and Descriptive Geometry at this University at the beginning of 1967.

*Very fussy about his letterheads*

*E.W. Shilbury*

After graduating from the Technical University of Berlin, he worked as a structural engineer with various firms in Essen - Ruhr and Berlin and later he became director of a construction firm in Berlin. Since 1939 he has been a structural consultant in Perth. In 1945 he was a lecturer in the Department of Engineering at Perth Technical College and in 1946 became head of that department until his retirement in December 1965. He was a visiting lecturer at the University of W.A. in 1968.

*"No questions Please"*

*D.M. Devenish*

Studied aeronautical engineering at the College of Aeronautical and Automobile Engineering London, from 1955 to 1958. Worked for a short period at A.V. Roe and then at British Aircraft Ltd. as an aerodynamicist until 1963. Since 1964 has been temporary Senior Demonstrator in Civil Engineering. He is currently very interested in Hovercraft.

*Waiting for the Chair of Aeronautical Engineering*

*E. Brook*

After serving with the 4th Field Survey Corps A.I.F. from 1942 to 1943 and the R.A.A.F. from 1944 to 1945, he joined the Commonwealth Department of the Interior in



1946 as a survey cadet and from there qualified as a licensed surveyor. Remaining with the Commonwealth until 1953 he was engaged on aerodrome surveys in the North West and on National Mapping. In 1954 he joined the Education Department as Lecturer in Surveying and later became Senior Lecturer in Surveying and Cartography. Resigning from the Education Department in 1962 he commenced private practice as a licensed surveyor and Cartographer. This year, he has been lecturer in Surveying in the absence of Mr. Sacks who is on leave. He is a fellow of the Institution of Surveyors and a member of the Institute of Cartographers.

*"Yes, that's right"*

*S.J. Thomas*

After receiving a Diploma of Mechanical Engineering from Perth Technical College, he worked as a draftsman in the Chief Mechanical Engineers' Office of the W.A.G.R. for five years. He then lectured at the Leederville Technical College for five years after which he became a visiting lecturer in Drawing 10 from 1957 to 1959 after which he was appointed full time lecturer in Drawing.

*A good bloke once you get past 1st year*

## Electrical

*Professor A.R. Billings*

Born in England, he graduated with B.Sc. (Eng) 1st class honours from London University in 1949. In 1956 received a Ph.D. for research work on "Speech Analysis and Synthesis". After working with Service Electronic Research Laboratories in England and later with Bristol University, he accepted the position of Professor of Electrical Engineering at this University in 1959. It is of interest that before obtaining his academic qualifications he spent three years from 1943-46 with the Fleet Air Arm stationed for some time in Ceylon. Professor Billings is a Senior Member of the I.R.E. and is on the Australian Research Grants Commission.

*"The violets are bluing,  
And Pooh is poohing!!"*

*K.W. Taplin (Reader)*

Commenced his technical training as an apprentice in heavy mechanical engineering

and power distribution but then studied communications engineering and obtained his B.E. at this University. Subsequently he was employed by the P.M.G. until 1947 when he returned to this University to lecture and later became Reader of the Department. He is a member of the I.E.E. and the I.E. Aust. Today he deals with Electrical Design, Accoustics, Illumination and has considerable interests in Engineering in History. After 22 years teaching in the Department, he retires at the end of 1968.

*"This is a condenser"*

*J.H. Bundell*

A University of W.A. graduate (B.E. 1946) who went to London University to complete a M.Sc (Eng) in 1956. In 1962 he was granted a Ph.D. at this University for Analogue Computation with Near Ideal Transformers (Network Analyser). He has had practical experience with the Power System Engineering Department of B.T.H.Co. (England) and has done Power Systems Design with the S.E.C.W.A. Concerned generally with power networks and electric machinery he is currently dealing with dynamic torque measurements.

*"You can forget all that crap"*

*J.V. Fall*

Born in Western Australia, first degree taken in W.A. with honours topic on the design of ultrasonic agitators. Before taking up appointment as lecturer in this University gained industrial experience with PMG research laboratories, Melbourne: Amalgamated Wireless A'sia Ltd., Sydney and Department of Civil Aviation N.S.W., with interests in V.H.F. Antennas and Navigational aids. Appointed senior lecturer in 1958; awarded Gledden Travelling Fellowship and spent 1958-1960 on the staff of Queen Mary College, London University, completing a Ph.D. thesis on the computer design of time delay equalisers. Present academic interests in circuit and system theory, but also concerned for the broader aspects of education. Past sub-dean of the faculty and past acting head of electrical engineering department, joined Currie Hall Council in 1966, became resident Fellow, 1967 and Acting Master of the Hall in 1968. Will be on sabbatical leave in 1969. He is a member of M.I.E.E. (London) and M.I.E.E.E. (U.S.A.). Past member of the Apex Club of South Perth; sport: squash. Other interests: reading, music, exchange of ideas.

*"Is that right"*



*B.G. Leary*

Studied for his B.E. at the University of New South Wales and was awarded a Ph.D. from Queen's University Belfast, in Northern Ireland for work on Random Signals in Non-Linear Control Systems. He has worked for Phillips, Stromberg Carlson, C.S.I.R.O. (Aeronautical Research), Royal Aircraft Establishment, Farnborough, Long Range Weapons Establishment (Salisbury and Woomera), C.S.I.R.O. Wool Research Laboratories and has been a lecturer at Queen's University as well as at this University. His current academic interests are Non-Linear System Identification and Electric Traction.

*"Prawning about"*

*J. Mills*

Graduated from W.A. University in 1952 and obtained his Ph.D. from this University in 1962. He has held various positions in the Electrical Engineering Department since 1952 and spent a year at the Imperial College in 1962. His present interests are in the field of Control Systems, particularly Adaptive Controls as well as the industrial applications of control theory.

*"Who's performing today?"*

*A.G. Nassibian*

Read Physics part-time at Birkbeck College, University of London and obtained a B.Sc. special degree. Later he was awarded a Ph.D. externally from the same University for work carried out at the Hirst Research Centre, Research Laboratories of English Electric. From 1954 to 1959 he was employed by B.I.C.C. Ltd. in their research laboratories at London where he worked on Alloyed Junction Germanium Transistors and Dielectrics. He then joined Hirst Research Centre as Senior Scientific Staff to find out about solid state diffusion of boron and phosphorous into silicon. This was followed with work on oxidised silicon surfaces which he continued when he joined the Department Physics of Portsmouth College of Technology as a lecturer. When he joined the Department of Electrical Engineering here in 1968 he had 5 published papers and the same number of patents. He is married with two children.

*x - the unknown quantity*

*D.H. Steven*

Graduated with a B.E. in 1952 and a Ph.D. from Sheffield University, the doctorate being awarded for work on microwave measurements. Before appointment to the staff in 1955,

he worked for the de Havilland Propellor Company. Current interests are in the field of microwave measurements and applications to thin semiconductor films.

*"Is everyone happy?"*

*A.E. Williams*

Having been awarded his B.E. with first class honours in Electrical Engineering in 1962, he went to the University College in London. In August 1966 he was awarded a Ph.D. for work on Radiation Pressure and Torque at Microwave frequencies. Returning to the University of W.A. in that year, he has been interested in Microwave Satellite communications. Likes athletics, hockey and golf and during his spare time, reads historical fact and science fiction. This year, he leaves W.A. for the United Kingdom where he intends to return to research.

*"Who bruk the laser"*

*A.E. Bradford*

Was awarded degrees in Mathematics (1962) and Chemistry (1963) from the University College of North Wales. Then in 1965 was awarded a M.Sc. as well for work in Semiconductors. This year, he came to W.A. to continue his research as well as teach. Currently working on Integrated Circuits and the Ion Implantation of semiconductors. He likes W.A. and intends to stay so that he can enjoy his favourite sport - sailing.

*"We have not got black chalk, but I'm working on it"*

*A. Scolaro*

Was awarded a B.E. from the University of W.A. in 1961 after which he worked at the Weapons Research Establishment in South Australia until 1966 when he returned to W.A. He is now engaged on Ph.D. research on Digital methods of Television Bandwidth Compression.

*"My watch must be wrong"*

*R.A. Jarvis*

Graduated from this University in 1962 with a B.E. (Electrical). He then worked for a year at the Muchea Tracking Station before returning here, and was awarded a Ph.D. for further research work this year. In 1969 he leaves for Purdue University, Indiana where he will continue his work in Adaptive Control and Pattern Recognition as well as teaching. Although he will be away for some time, he hopes to return here eventually. Ardent enthusiast of Golf and Computing.

*"Don't worry, you should all pass"*



# Mechanical

## *Professor D.J. Allen-Williams*

From the University of Cambridge he received a B.A. (Mechanical Sciences Tripos) in 1939 and a M.A. in 1943. During World War II he built ammunition storage tunnels for H.M.O.W. and then worked on radio and radar countermeasures at the U.K. Telecommunications Research Establishment. In 1953, he was awarded a Ph.D. for research on the use of a 30Me V Electron Synchrotron as a Radiotherapeutic Instrument. He also worked as Chief Research Engineer for Davey Paxman and Co. Ltd and then in 1958 accepted an invitation to become the inaugural Professor of Mechanical Engineering at this University. He is a member of the I.E. Aust. and of the three senior U.K. Engineering Institutions. He represents this University on the Council of the Australian Institute of Nuclear Science and Engineering. His interests include Automatic Controls, Nuclear Power, Development of the North West of W.A., individuals and music.

*"Well what are you going to do about it?"*

## *J.A. Cole (Reader)*

Was awarded a B.Sc. (Mechanical Engineering - 1st class honours) in 1945 by the University of Manchester, which was followed in 1946 by a M.Sc. He then worked at the National Physical Laboratory, Teddington, on gas dynamics and then at the National Engineering Laboratory in Scotland on Hydrodynamic Lubrication. In 1952-53 he worked on the N.A.S.A. holding a Robert Blain Fellowship. He joined the University of W.A. in 1958 and is engaged in teaching and research on Fluid Mechanics. Just before going on study leave for 1968 to the "new" U.K. Universities of Kent and later Sussex, he visited American Universities and research establishments after presenting the results of his research on "The Generation of Taylor Vortices Between Eccentric Rotating Cylinders" to the A.S.M.E./A.S.L.E. 1967 conference in Chicago.

*"I have become quite a science fiction addict, I must confess"*

## *G.G. Lutz*

He graduated from the University of W.A. in 1937. Became an associate member of the Institution of Engineers, Australia in 1943 and a member in 1958, elected Chairman of the Perth Division of the Institution in 1958 and a member of the council of the Institution from 1959 to 1961. He is at present carrying out research on heat Transfer in Nuclear Reactors. His experience includes Engineering appointments in Victoria with the Commonwealth Government Ammunition Factory, Industrial Service Engineers and the Munitions Supply Laboratories. He spent the major part of his sabbatical leave in 1957 at the Harwell Atomic Energy Establishment and subsequently, in 1965, was Visiting Professor in charge of Nuclear Engineering at San Jose State College, California.

## *A fast reactor*

## *R.S. Minchin*

Awarded his B.Sc. (Eng) by the University of W.A. in 1944, he went on to a B.E. (1st class honours) in 1952. Became an Associate Member of the Institution of Engineers, Australia in 1948. Served with the R.A.A.F. 1940-41 and in 1945 reaching the rank of Flying Officer. Was Assistant Engineer in the Mechanical Branch of the W.A.G.R. from 1945-47 and Assistant Mechanical Engineer with the Metropolitan Water Supply from 1947-49. Commenced lecturing at this University in 1949 as a Lecturer and was appointed Senior Lecturer in 1955. He was on study leave in 1956 with the de Havilland Engine Co. Ltd. in England, and again in 1963 with M.A.N. and Ford in Germany. Particular interests are Railway Mechanics, Gearing and Vibration Measurement. He is President of the Society of Model Engineers and likes Fruit Salad and Ice Cream.

*"Equipment is valuable - don't use it"*

## *E.W. Hemingway*

Graduated with a B.Sc. (Eng) from London University and went on to a D.I.C. for research work on lubrication. Joined the W.A. University in 1960 after 3½ years at Sydney University, 3 years (1945-48) with the R.A.F. and two years (1953-55) employment with Rolls Royce. Current research is on lubrication of thrust bearings, measurement of film thickness and pad shape under lubrication generated pressures



for which he was awarded a Ph.D. by London University in 1967. In 1968 he attended the Birmingham University course in Applied Thermodynamics while holding a Gladden Travelling Fellowship.

*"There should be a gas turbine in every sewerage treatment works"*

*J.G. Wager*

Graduated from the University of W.A. in 1954 with the distinction of having been President of the U.E.C. in that year. After working for two years with the English Electric Co. he returned to this University in 1957 as one of the staff. He was subsequently awarded an M.Eng. Sc. for work on the effects of surface texture and motion on pneumatic gauging. In 1964, he went, on leave, to Purdue University in the United States where he obtained a Ph.D. in Industrial Engineering. He returned to this University in 1967 and is particularly interested in applying statistics to manufacturing processes.

*"I invite you to get the feel for this"*

*R.B. Noyes*

With a B.Sc. (Mechanical Engineering) from Purdue University and a M.S. from Oregon State University he joined our staff in 1963, after a period in the Lawrence Radiation Laboratory, University of California. This year, he has been on leave, working with an American Company. There he has been working on the optimisation of structural materials for supersonic aeroplane wings and generally on a survey of the whole field of utilisation of materials in an endeavour to determine the (literally) most profitable area of research.

*"You wanna lecture today"*

*J.A. Appleyard*

Has a B.Sc. from Leeds University, England, and has held the post of Senior Research Engineer in the Mechanical Research Department of Bristol-Siddley Engines Ltd. After three years as a lecturer at Ahmadu Bello University in Nigeria, he joined our staff in 1963. His present research deals with the development of solar radiation for air conditioning in buildings.

*"That's another Ph.D. for someone"*

*J.R. Blair*

Graduated from Edinburgh University in 1960 and B.Sc. (Eng) and in 1961 received a diploma from the School of Applied Dynamics in Edinburgh before joining Rolls-Royce Ltd. (Aero-Engine Group) until 1963 when he came to this University. He is interested in mechanical vibrations and automatic control, and is currently trying to train a Landrover to follow a piece of string around a paddock.

*"If you're vague enough, they'll never prove you wrong"*

*P. Hancock*

Came for 6 months in 1968 replacing Mr. Noyes who was on leave. Graduating in 1954 with a B.Sc. (with honours) from Manchester University, he moved to Cambridge where he obtained his Ph.D. in 1957. After three years as a research metallurgist with International Nickel Company Research and Development Laboratories, he joined Glasgow University. There he is Senior Lecturer in the Mechanical Engineering Department responsible for all teaching and research in Properties of Materials. Before he became the third man to come to this department from that University, he had prepared a critical review for the British Ministry of Defence on the current state of High Temperature Research in Turbines and Boilers.

*Australian Thirst and an English Capacity*

*R.C.R. Johnston*

Graduated from Melbourne University in 1952 with a B. Mech. E. and following two years post graduate work obtained in M. Eng. Sc. He spent 18 months with a company manufacturing small petrol powered implements and then joined the Division of Mechanical Engineering C.S.I.R.O. in Melbourne. There, he was initially engaged in a study of plough forces and agricultural mowers. Later, he transferred to the solar energy group where he was involved with heat and mass transfer. In May 1967 he joined the staff of this University and is currently working on cooling tower theory.

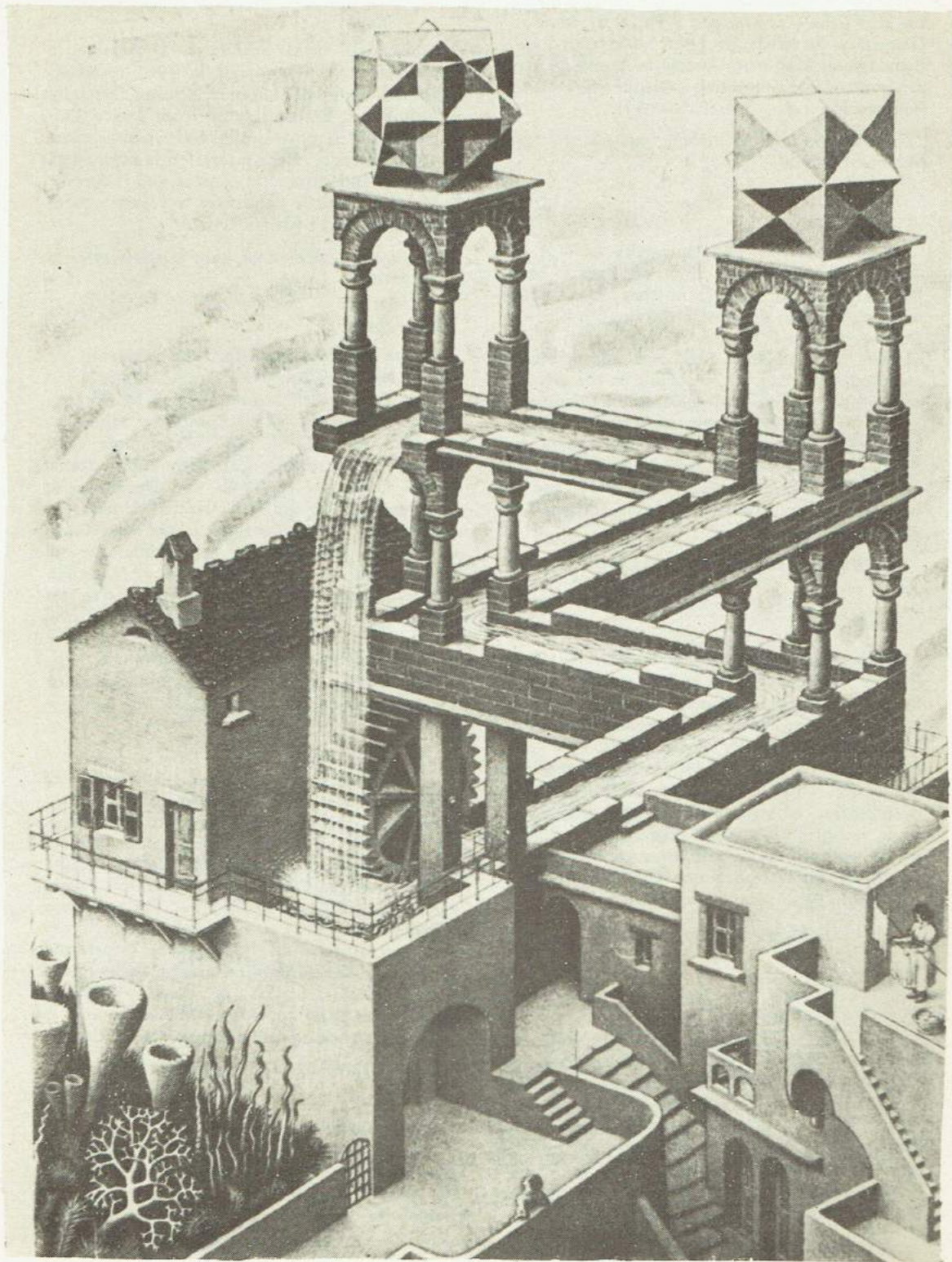
*"Never give a straight answer"*

*M.B. Widden*

Has an M.A. from Cambridge where he graduated in 1964. He worked for Sigmund Pulsometer Pumps Ltd. for three years and joined the staff of this University in 1967.

*"I don't really know"*









## SECRETARY'S OFFICE

**T**he Janitor of the Engineering School,  
A slight little fella, but he's no fool,  
They fetched him over from Adelaide,  
Was the biggest mistake they ever made

He fusses around as if in a chase,  
Anyone would think he owns the place.  
Tho' he takes time out to flirt a bit,  
Reckons we act like nits in a fit.

At 8.45 he comes along,  
Taps on the counter, bong, bong, bong.  
At 9 a.m. he's off with the mail,  
A rush of cold air he leaves in his trail.

By half after 9, old Charles returns,  
The mail then is for our concerns,  
He then goes off to have a break,  
A cuppa tea and a piece of cake.

Smoko over, the body's re-sparked,  
'Going up to the top' his next remark,  
He's often gone for nearly an hour,  
And we're left, so to speak, without any power.

But back he comes with a flurry of nerve,  
His beloved Faculty again to serve.  
Struts up and down like someone of rank,  
Look out any student who's up to a prank.

Comes lunchtime and Charles takes first sit-ting,  
Chicken and delicacies fit for a King.  
He's always raving about what he can eat,  
Haven't heard him say much about his flat feet.

By 2 he's on the beat once more,  
Rapping at the counter or on the door.  
Off with the bag and back again,  
And tells you what it might contain.

A few more duties and a round or two,  
A bit of cheek and a 'how do you do'.  
Around once more for a final check,  
Ready for the morrow like a well-washed deck.

This janitor of ours he's a good old sort,  
A gentleman (sometimes) and a pretty good sport,  
As they say, without Punch, it'd be no show,  
We'd sure miss Sir Charles if he were to go.

# TO SIR CHARLES

Dawn Newman (Dean's Secretary)

## DO YOUR BANKING INSIDE THE UNIVERSITY...

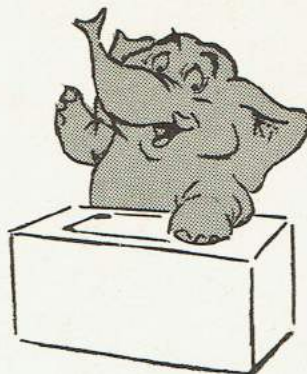
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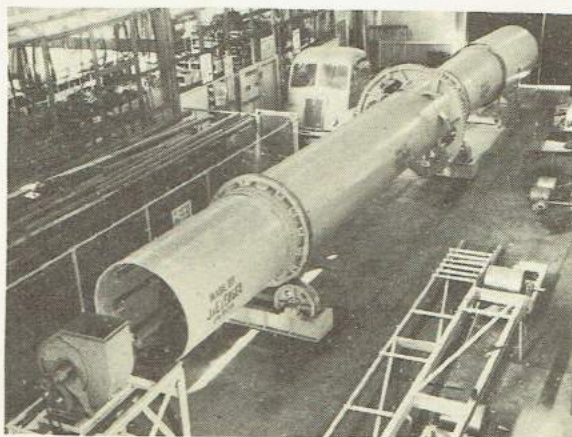
**Get With the Strength**

# ***BANK COMMONWEALTH***

## A 'BRIGHT FIELD' For W.A.'s Young ENGINEERS

THE LEDGER GROUP IS ALWAYS ON THE ALERT FOR UP AND COMING YOUNG MEN WHO ARE SEEKING A CAREER IN THE MANY FIELDS OF ENGINEERING OFFERING THROUGH W.A.'S MARVELLOUS PROGRESS.

Illustration shows Rotary Kiln Dryer, complete with fully enclosed Screw. Over the years Ledgers have manufactured numerous Rotary Kilns, usually as part of Mineral Concentrates Refining Plants. This is the type of Plant requiring engineering and design ability.

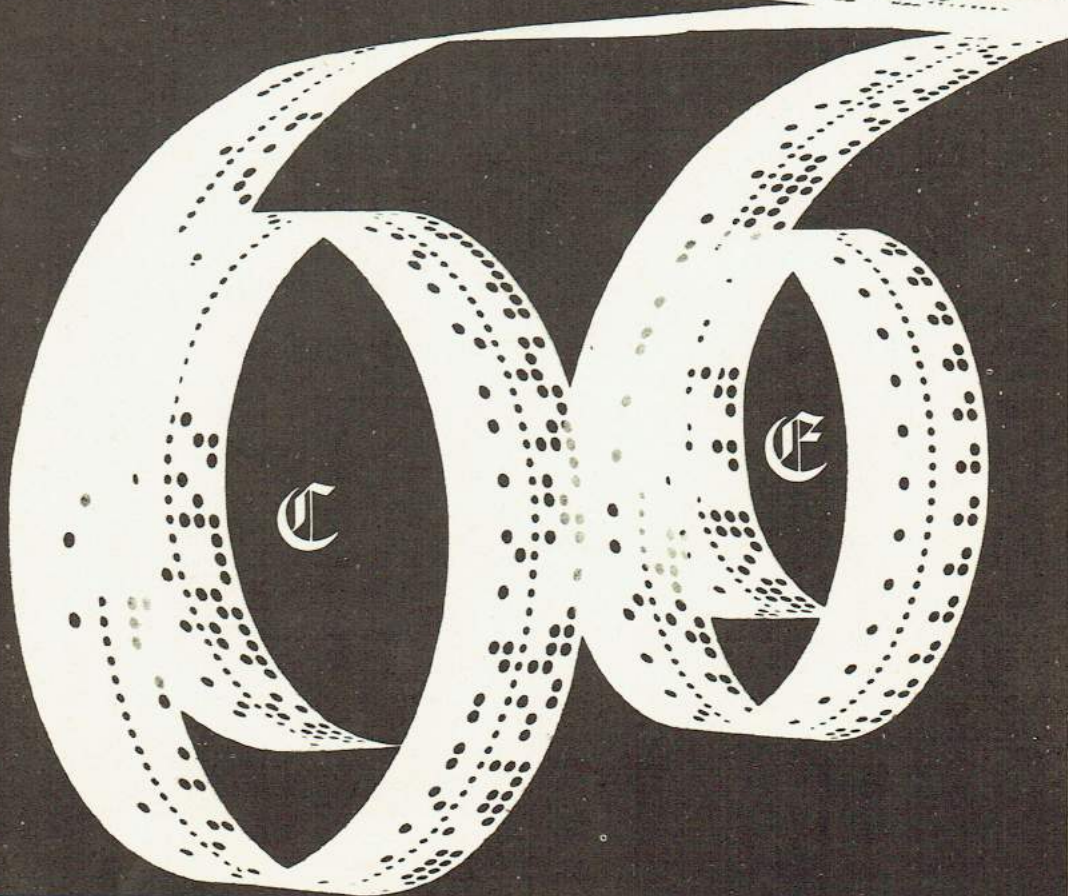


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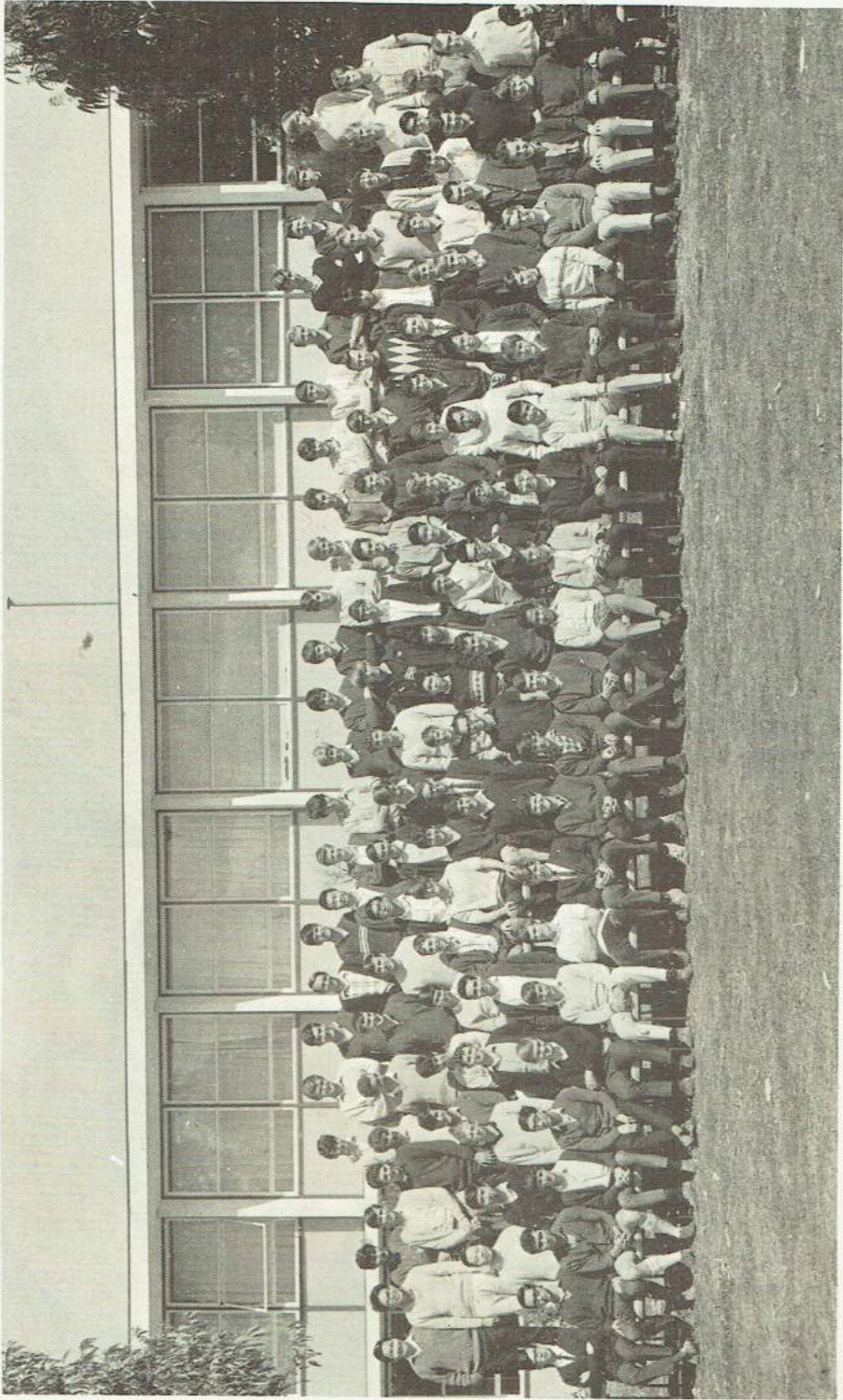
231 - 249 Pier St. Perth. (A Member of the Mitchell Cotts Group)



year notes









1968 was going to be the year when we freshmen would revolt. No more would freshmen ignore the ignominies of initiations. With this in mind we formed a conspiracy under the leadership of one who prefers now to be forgotten. Our plan was to rush the senior years before they were properly organised. But alas! We were betrayed; our noble ringleader suffered the dubious distinction of being the first freshman ever to cover the initiation course twice in one night.

Having earned our place in the Engineers' Club we were ready to defend the club's honour against all comers. Thus the annual Tug O'War with the Lawyers was a one sided affair with the Engineers annihilating the opposition. First term was also notable for the Engine's Ball - the first ball ever for most of us - and one which many foreheads will never forget.

During the rest of the term, the absentees from the initiations appeared to have found a new way of drowning their sorrows. For some unknown reason, they frequently 'jumped' into the library pond - much to the annoyance of its usual inhabitants. We made great efforts to prevent them but with amazing determination they continued to initiate themselves.

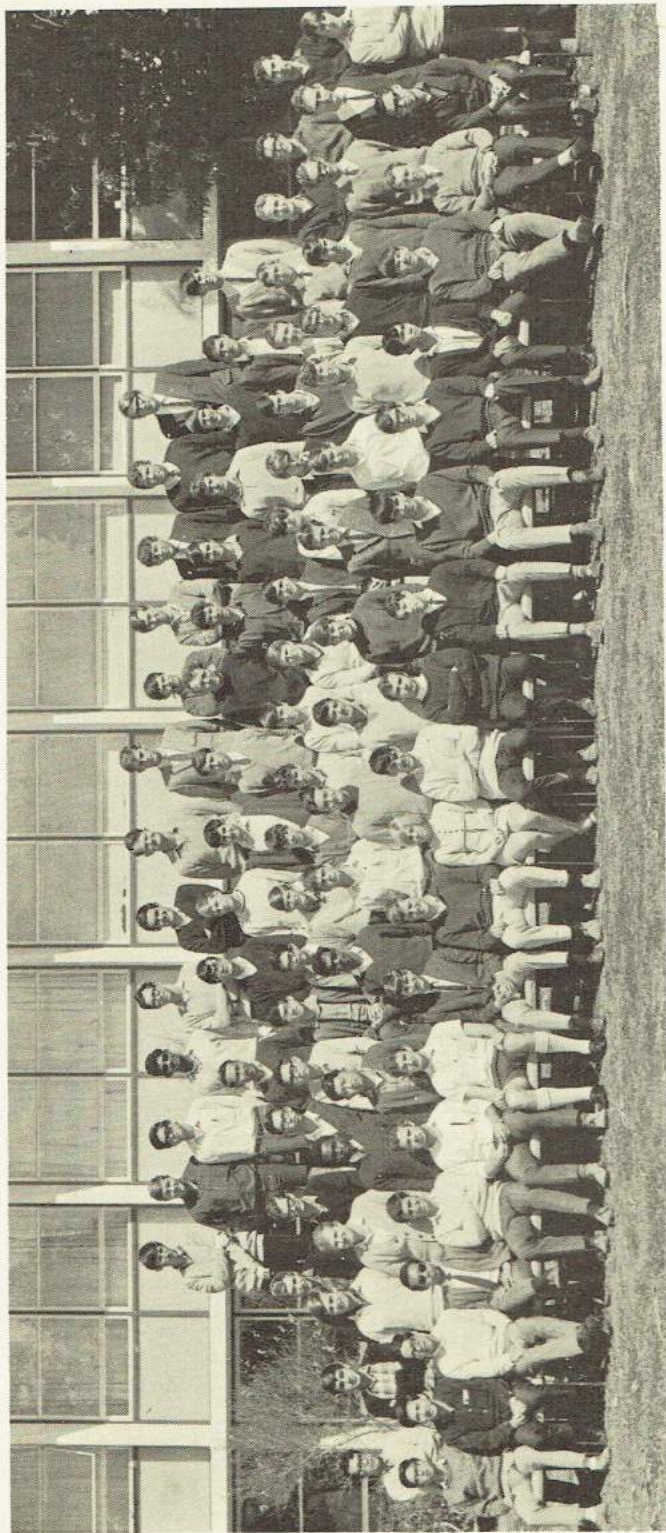
Here and there among such extra curricular activities, some of us managed to hand in a few assignments and do a bit of study. Just how much study can be gauged from the first term exam results. Quite an unfortunate business all round as the heads of 9 of our honoured repeats' rolled in the aftermath.

One bright note for all those who may not make it to second year...A few members of the Concored Syndicate have been seen snooping about the first year lecturer theatres and are anxious to sign up a few of their budding young aeronautical engineers. It is therefore all the more puzzling that some of our lecturers failed to see the skill and grace inherent in our paper plane designs. Still, some of us hope to come back next year and maybe enlighten them then.

Although we may not be remembered for our academic prowess we can at least say that we contributed towards the regaining of the Goyder Cup. Now we have it we intend to keep it as long as we are here - a period we hope that adds up to exactly four years.

## First Year





## SECOND YEAR

M. Moriarty, G. Elderfield, W.S. Tan, M. Chinniah, B. Taylor, J. Robertoni, J. O'Brian, C. Prosser, J. Caro, D. MacDonald, C. Rho, B. Loughton, C. Drakes.

W. Subroto, W. Fok, A.S. Tan, L. Hoffman, G. Hesford, E. Jensen, C. Davies, I. Parker, M. Croy, R. Anderson, C. Condipodero, R. Spence.

G. Bagworth, D. O'Connell, Tay, C.N. Chong K.P., Ang K.L., Fung T.B. P. Nadebaum, L. Margetts, D. Kelly, C. Burton, D. Allen, R. Banyard, B. Douglas, A. Van Der Linden, C. Pollett, K. Jones, R. Quinn, T. Harvey, J. Blackburn, D. Humphries

M. Hashullah, M. Stojinovic, F.D. Barker, D. Faigenbaum, J.A. Allen, K.F. Koh, D.J. David, R.W. Griffiths, F.R. Winkler, G.P. Simpson, I.M. Hutton, P.J. Wyche, B.K. O'Leary, G.L. Hall, J.N. Waddilove, D.J. Raymond P.J. Paterson, L. Crooks,

K.E. Chan, T.H. Leung, A.M. Jayasuriya, L. Zekas, J. Busuki D.J. Glenister, D.B. Herd, R.W. Hammer, M.E. Dowling, R.K. (Miss) Clarke, C.B. Fitzhardinge, G.C. Cock, R.P. Leonhardt, A.J. Burke, G.T. Ferrero R.B. Samad, M.C. Basell, D.C. Nicolson, H.K. Koh.



Nobody knows how many of us existed.

No doubt the Faculty could give a number but ask the second year rep for a figure, and, thanks to numerical analysis, he wouldn't know which end to start. Anyhow, who was the second year rep?

The differential solution was that there were few enough to fit into one lecture theatre, but too many to know if any particular body actually belonged to the Faculty.

Roughly, the year was divided into three categories, the 8.55's and 9.00's and the 9.05's.

Lowest of the low were the 8.55's, the proletariat. They invariably sat right down the front, in the pit, and were, on occasions, known to indulge in a degree of repartee with the floorshow.

The 9.00's formed the bourgeoisie, stalwart citizens of the middle stratas. They usually congregated in groups of four or five, large enough to permit simultaneous conversation throughout the lecture, but not so long as to prevent artistic engravings made during the course of the lectures to be appreciated by all concerned.

The 9.05 echelon was the aristocracy; they would command the most respect on any occasion. Invariably their entrance would be heralded by the muffled thump of the outer door. All heads turned obediently as the student princes burst over the threshold to take their seats with a discordant fanfare. The seated populace would stare in wonder, until, with metallic click their files opened: the lecture could continue.

The pecking order was made manifest in other ways. The plebs thought themselves superior to the middle classes as their lecture notes were complete, even to the infinitesimal caption on Doc. Williams' output characteristics.

The middle class practised one-up-man-ship on the upper class, for at least they could furnish some lecture notes.

But it was the back street boys who had it over everybody; not only did they arrive after the regurgitation of the previous lecture, just in time for the latest pearls of knowledge, but they also developed an extensive system for

utilizing the notes of the lower classes.

The most intricate development of the year was the hair line. Several beards came and went, and we know of at least one abortionate tea strainer, but the most consistent growth was shared between Croy's sideburns and Haime's Moustache ends both of which should have reached their respective navels by the time this appears in print.

Dale, Ros and Yvonne are still with us, though noting the way Yvonne looks at another member, we wonder whether she is completely with us. Dale looks cultured and Ros.....was not Miss Engineering this year.

We seem to have developed a number of Goyder Cup enthusiasts, all of whom protest that it's the game that inspires, and not the incentives. There are even Engineers with a literary bent, and one with a sporting literary bent.

It would be true to say that not many of our lecturers give us a sporting chance. We have, of course, in mind:

Appleyard, with whom even a carburettor becomes an examinable subject;  
Billings, whose dress was as impeccable as his lectures;

Bundell, who delivered a coup de theatre with a cigarette;

Fall, who thought we remembered something from last year;

Hancock, whose factor of ignorance reads, "It's as near as dammit is to swearing".

List, who is no literary genius;

Lutz, who believes that no two Mollier diagrams should be identical;

Massy (Unc), who is beginning to resemble a current newspaper advertisement, especially when viewed from above;

Minchin, who gave a great deal of advice on race relationships;

Smith, who has trouble balancing equations;  
Spillman, in spite of whom many still believe that Coriolis was a product of Cecil B. De Milne;

Storer, who believes and it is probably true, that hence etc, is the clue;

Tappy (also known by other names) remnant of a by-gone era, but secretly admired.

White, to whom analysis is not only 'trivial' but fundamentally intuitively obvious.'

Williams, who although professes to analyse small signals, did not recognise the same when his lectures ran overtime.





*J. McCartney, J. Crow, U. Filippi, T. Humphries, A. Van der Meer, P. Brearley,  
R. Grieve.*

*J. Yorath, C. Ho, C.H. Tham, B. Benett, J. Van der Meer, G. Hoey.*

*R. Dimond, M. Naismith, T. Hambleton, D. Cousens, B. Combs, A. Smith,  
B. Kidd, D. Warnock.*

### THIRD YEAR CIVIL

The Gospel according to the Apostles  
James, Andrew, David and John (in disguise)

Chapter 1968  
Verses 1 - 32

There's a warm tale to tell  
not of Eskimo Nell  
but of lads with CIVIL in mind  
they form a great crowd  
and are most endowed  
with ability to lag far behind.

Young Yorath is here  
in his snug Hobart gear  
and a devilish grin on his face  
for at darts he did toy  
with Alan the boy  
who just can't seem to keep pace.

Some are mature  
Umberto for sure  
who's sex life has been very full  
for together with Mox  
always dead keen on 'rocks'  
their weights they are able to pull.



Now William for sure  
is a lad who'll endure  
even the toughest of tests  
but giving up smoking  
he is always joking  
is nothing more than a jest.

Luftwaffe Dave  
seems well behaved  
and his appearance is usually neat  
though beer it may cool you  
don't let that fool you  
it always knocks Dave off his feet.

There are dribblers too  
but only a few  
Dopey Dick being one of the greats  
at arrows he's fine  
at drinking divine  
as treasurer he just doesn't rate.

From south of the Swan  
hail Terry, Barry and Don  
three lads who are all very keen  
with Graeme and Pete  
their work is so neat  
none better in CIVIL is seen.

There's 'Gash' and there's 'Scrubber'  
who without much bother  
steal the limelight wherever they go  
and the mob they have floored  
with their language so broad  
a thousand four-letter words they do know.

There's Brearly and Lowe  
plus daredevil Crow  
they hate to stand out from the mob  
sneaking around  
without murmur or sound  
engrossed with their own little job.

Thum, Teh and Cheong  
please don't get them wrong  
as bludgers they all take the cake  
at surveying they're slow  
but give them a go  
ENGINEERS one day they will make.

Andy and Jim  
both have a whim  
to torment the lecturers so  
through square roots and powers  
for hours and hours  
for answers they already know.

There's Mok and Ho  
and Liaw and Low  
and a young man, named Nguitragool  
and much money they've made  
from illicit trade  
by selling their wares at this school.

Now Daryl and Mac  
both look very slack  
and Tim's having a ball  
Neish can be seen  
as he lives in his dream  
but Brian's the worst case of all.....

### POPPYCOCK

*A pipping pipistrelli,  
Was pelling vermicelli,  
When a pipsqueak of a pipit  
Started piping on a pipette  
Of the joys of pipping pippins in a pipkin.*

Godfrey Lowe  
Civil III



*A. Wiejers, Y. Lee, V. Power, A. Koenig, B. Varley, M. Cook, S. Ng.*

*D. Hume, E. Johansen, P. Quek, D. McBean, C. Gazia, J. Beale, C. Chua.*

*Y. Ng., P. Morgan, T. Kangsanant, N. Chuong, L. Ali, R. Turner, C. Chang, J. Di Camillo.*

### THIRD YEAR ELECTRICAL

It is customary for the Engineers of later years, whether civil, electrical or mechanical to fraternise on all possible occasions. Earlier editions of 'Non Loqui' bear out this fact. It seems surprising, therefore, that no such tale can be told of 3rd Year electrical. 12.45 (or more usually 12.59, thanks to A.R.B. and others) results in a mass scattering of men (and a woman) in all directions, rather than an orderly file down to Steve's as was previously the case. Even such huge unifying forces as the 50th Engineering Ball and a combined Science and Engineering Exhibition failed to have anything more than a transitory effect on this small, 30-strong band. So I report this year on a rather mottled bunch, consisting of the following notable specimens, and some others, rather less notable.

P. Morgan — Showed a distinct partiality for liquid lunch — partaken at the 'Conti' among other establishments. Rarely to be seen except when the lecturer beckons.

A. Koenig — Tall, handsome, quite — the perfect gentleman. Also known as the 'phantom trumpeter', and he eats apples during lectures. It has not yet been determined whether these two phenomena are related.

R. Pooi — Dick?? Where are you, Dick??!!

B. Varley — Man on a cycle — frequently seen peering into the display of the PDP-6 looking for satellites, or kicking the 1620 in fury at odd hours of the morning...(still looking for satellites, we think).

J. Di Camillo — Notable (particularly to Biggles) for his late arrival for lectures. It is rumoured that he even mumbles 'Sorry I'm late' in his sleep.

Chuong — A man of many and varied interests. Spends most of his time studying. When not seen studying he is sure to be somewhere else studying, studying and studying.



Ng, Ng, Ng....?? (SS?, FKC?, ??,) — A really truly earthly trinity. Not distinguished by physical similarity - however, on the intellectual plane...

Miss Hai — A touch of oriental type glamour. Also the only one of us who dared to tackle one of Doc Leary's ferocious tutorial questions on the board without notes - and get it right!!

Carl Gazia — Resides in the 'house of left foots' over the road, and therefore leads a pure and holy existence (Chortles from J.B. and others)

McBean-Hohansen (Dave-Edwin) — The closer approach to Siamese twins yet devised. Exchange everything from lunch to lecture notes.. (Everything???)

We end with a tribute to those indefatigable intellectual stevdores the lecturers, who tried their utmost to render the year bearable, however...

A. Bradford— Wins the yearly award for the most obscure lecturer. 'We haven't got any black chaulk, but I'm working on it!'

J. Bundell —Inventor, among other things, of the combined 'Smoko-Lecture' and the 'current suck' but was narrowly beaten by Doc. Mills to the discovery of the century - the performing circus tutorial.

B. Leary — The little inconspicuous chap in the white lab coat - could he be the 'Flick Pest Control Man?'

Prof — Imitated by many, successfully copied by only one - the PDP-6 teletype.

Alby Williams - At 9 a.m. that primeval Monday morning was the first sign of impending doom. The second came one minute later when he began to expound his own personal theory of electromagnetism, accompanied by reams of elegantly poetic lecture notes. "These account in part for the great success of Alby's lectures".



*S. Dobson, S. Wiriyacosol, P. Hemsley, B. Downie, C. Sayer.*

*T.A. Kiet, K.P. Goon, K.S. Lim, B.K. Tang, J. Trevelyan, G. Binckes.*

*V. Tinh, K. Beer, A. Blaquieres, D. Ban, M.T. Lau, J. Anderson.*

### THIRD YEAR MECHANICAL

17 Enthusiastic students, eagerly awaiting the tasks that awaited them faced Professor Allen-Williams with dismay! Students lecturing? But..surely..As we tried our hand at explaining the mysteries of Computers, the Prof sat back to enjoy a series of most interesting lectures. Long silences punctuated with umm's and err's were often the order of the day, while others lost themselves in yards of mathematics spread out in uneven rows round the new fangled blackboard some devil thought up for others' delight.

At first the idea of handing in two reports a week was just another joke. Whereas one overdue report was exceptional in the closing days of first term, half a dozen was the mean of the 'R' distribution three months later.

Steve travelled all the way to Melbourne to get his head "smashed in". A few weeks later, Arthur did a much better job - just outside Kingswood.

As the Exhibition approached, one member of our elite group gradually ceased to appear at lectures. During his absence, muffled swearing was heard to come from the Thermo's Lab. After intensive investigation, we found him patiently trying to start a reluctant Hovercraft. All this and more as strange smells and voluble explanations about sitting on paper and standing on light bulbs wafted down the corridor from the Materials Science Lab.

By far the most amusing section of the course was the "Dream-time", otherwise known as Design. Visions of windmills, gracefully turning themselves on and off, drifted through our minds as Mr. Widden delivered the *coup de grace*: "Really, you know more about those contraptions than I do." Mechanical Students could be seen dangling high above Jandakot fowl yards as they investigated the intricacies of the control levers; Designs painfully materialised. Variable pitch, compressed air, power pistons, chain climbers, the gizzards of lavatory cisterns...the mind boggles!



And who were those magnificent men who designed such fantastic machines?

Dobbo — Slightly cracked? Anyone suggesting 'Variable Pitch Windmills' must be!

Wiriyacosol — Insisted on bringing his girlfriend as second class luggage from Bangkok.

Hems — Frequently snores loudly and waggles head in the library.

Downie — Father of the Year — so now taking Engineering part time.

Sayer — Couldn't control himself so he got engaged!

Binckes — Spent most of his time winding Wilberforce springs round debating and sporadic attempts at Mechanical Engineering III.

Trevelyan — Hasn't been since seen the Russians invaded Czechoslovakia — nor has that Hovercraft.

Tang — Decided early on to take Billiards full time.

Lim — Has learned 'Are you engaged' in every language. He says he is prepared for any international crisis.

Goon — Goon Show?

Kiet (Kangaroo) — Occasionally hops into lectures when the T.V. breaks down. Pseudo-Connoisseur.

Tinh — Canned beer.

Beer — Bubbly, boozy, blissful, bawdy, blasphemous, barbaric....though underneath he says he is quiet, gentle and sometimes even studious.

Blaquiere (Slaquiere) — Tried to apply the principles of automotive panelbeating to his nose. 'Works' part-time at the Bookshop.

Ban — Tried to row himself to work at Mount Tom Price...forgot when the rainy season stopped.

Lau — Loud long lamentations on lousy labour.

Anderson — The one and only who can smash his elbows together behind his back. Reputed to have almost committed suicide when he drowned his radio at an Air Force 'Booze-Up' during the first Test.

Prof. Allen-Williams — Enjoyed asking tricky questions from students after they had tried their aptitude at lecturing.

Dr. J. Wager — Tended to substitute lectures for tutorials, Managed 1 hour 32 minutes of Industrial Engineering in a 45 minute lecture - once (thank goodness)

Mr. R. S. Minchin — Was rarely seen at lectures at all. Amused all of us with his interesting fairy tales.

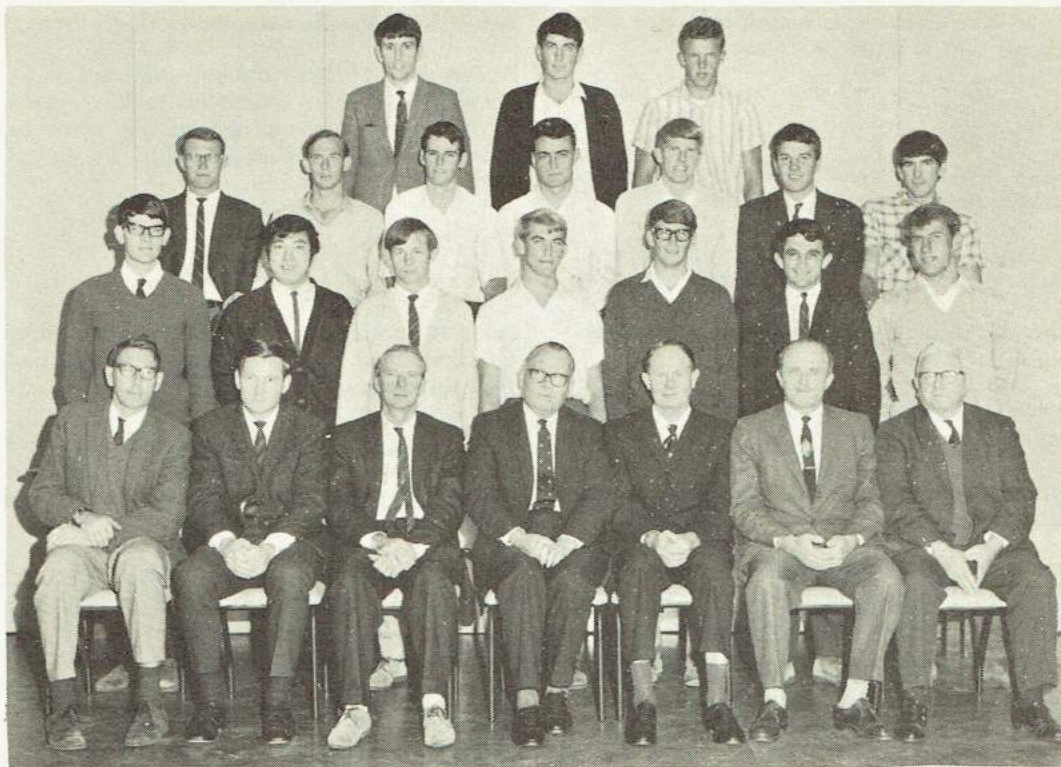
Mr. M. Widden — Was heard to complain incessantly that he couldn't throw darts while he deliberately obliterated, with others, a student side at the common room show. 'You probably know more about windmills than I do!'

Mr. J. Blair — Often says:

'Has anyone done any Automatic Control since last week'

Mr. G. Lutz (Handsome, Debonaire) — Invites students to bring their girlfriends with them to boiler Trials among other things.





*A Moyle, V. Acalinovich, P. McGuire.*

*D. Burvill, J. Giumelli, M. Henneveld, P. Sanderson, L. Metcalf, R. Lantzke,  
A. De Rossi.*

*K. Colledge, J. Bromell, P. Eastlake, G. Maugher, D. Hough, T. Ong, I. Morrison.*

*Mr. H. Craddock, Dr. B. Clegg, Dr. C. Massey, Prof. K. Cooper, Mr. B. Smith,  
Mr. J.H. Matthews, Mr. R. Hebbert.*

#### FOURTH YEAR CIVIL

One hundred and twenty freshmen  
Came in from roundabout  
And after their time was o'er  
Only forty were let out.

One by one we took up Civil  
The only course to do  
Until today there's a bare nineteen  
And who knows if they'll get through.

A Mr. Matthews he was there  
With work he piled sky high  
Day in day out, he piled it up  
It really made you cry.

Mr. Hebbert - he was there  
Somehow in a knot  
Something has confused him  
In the equation he has got.

Doc. Massey - he was there  
With his pile of notes  
Beware of him for it is he  
Who separates sheep from goats.

And - oh Cleggy - he was there  
With sails he led the way  
Although he's hard to follow  
He's still around today.



Oh Hairy Ventriss - he was there  
Coming every day  
He didn't start off with us  
We got him on the way.

Digso Burvill - he was there  
Uncle Mal's best fan  
But besides his footy interests  
There's a certain little Anne.

Oh the Blonde Dutchman - he was there  
He's just had his twenty-first  
There's a chance he'll get another  
When he's gone and quenched his thirst.

Yep! Ross Lantzke - he was there  
Another first class slacker  
Never was so little done  
From so much flamin' yacker.

Hoffie-Hough - he was there  
This year really in the dumps  
Getting dropped from footy  
And recovering from the mumps.

Jungle Maguire - he was there  
He loved his four-letter words  
Never failed to use 'em  
Even in front of birds.

Ian J.M. - he was there  
He's keen on the S.E.C.  
To it he bows in Mecca fashion  
As well as to his Julie.

Geoffry Mauger - he was there  
His brain being always used  
When not annoying us  
He gets a computer confused.

Metty Metcalf - he was there  
(in the second row from the front)  
Never ever slacking  
Even worked on weekends!  
When he wasn't bivouacking.

Jake-the-Reg Moyle - he was there  
Likes his surf and boozing  
Never skips a lecture  
'cept when It's not his choosing.

Red Fred De Rossi - he was there  
He liked to ask a question  
To bugger up the lecturer  
And lengthening the session.

Jack Bromelli - he was there  
An active bird chooser  
As well by God be could drink a drop  
A king-size little boozier.

Peter Eastlake - he was there (sometimes)  
A fellow who's really boring  
But don't worry world  
He's going in the army.

Big Vince Acka - he was there  
His conching's made him thinner  
Although he ships the social side  
He'll be there, at the dinner.

Yep - Knowledge College - he was there  
Every weekend shickered  
Surfin' at Lancelin  
Or being yellow stickered.

Ronald Renton - he was there  
Conching eight days a week  
A wild looking character  
But really very meek.

Sando-Sanderson - he was there  
We called him Tex-arse  
A real King size slacker  
With ability to pass.

Tommy Ong - he was there  
Last time he didn't pass  
But he shows his disapproval  
By not turning up to class.

Fred Giumelli was he there?  
Seems always in a flap  
He will be moneso now  
'Cause he wrote this load o' crap.

But not the course is over  
We'll all go our separate ways  
From Dardanup to Dover  
We'll remember the good olde days.



#### FOURTH YEAR ELECTRICAL

*L. Hebiton, L. Seddon, R. Perry, C. Lewis, G. Milosz,  
B. Zec, P. Schoonens*

*S.L. Tung, R. Dillon, D. Myers, R. Stephenson, P. Lawrence,  
J. Lorenti*

*Dr. B. Leary, Dr. A. Williams, Dr. D.H. Stevens, Dr. J.H. Bundell  
Professor A.R. Billings, Dr. J.V. Fall, Dr. J. Mills, Dr. R.A. Jarvis, Mr. A.B. Scolaro.*

In the beginning there were eighteen sons of Adam,  
Apprenticed but three years to the Dept. E.E.  
A happy bunch, carefree and gay.  
To study hard, and learn things quite irrelevant.  
So, one third of their rank were wrenched asunder,  
Gone, never to return.

Short-lived was their meagre cup of joy,  
The Master began with information theory,  
"And hear ye", were his words,  
"If thou should understandeth at the Nyquist rate,  
Thou shouldest get at least fifty percent".  
"With this marvellous theory", he continued,  
"Thou canst chop up speech and transmit bits,  
And it will still be unintelligible".  
"Thus spake the Lord, and the chosen few cowered,  
For his might and brain power are fearful to behold.

Soon, the minions of the Lord didst join the fray.  
"Oh, fear not," saith Duncan,  
"I shall have studied it by the morrow,  
And will transmit the truth in all its glory."

"Readeth thou the Good Book", saith John,  
"For inst it, it doth say 'Yay, Yay' and 'Nay Nay',  
For why thou shouldst study binary systems".  
"Cometh, and I will shew thee wonders".

"And thusly saith the Lord,  
Thou shalt inscribeth upon the second stone,  
That Zeta should equal but one half".

But these dolts of the fourth year were not lifeless,  
Why, they didst once espy the good Doctor John,  
To yawn whilst he wrote upon the board.  
"Aha", they reasoned, "this control system in not at all optimum".



And they had their happy moments.  
 Oh glorious the occasion of the welcome of the  
 freshmen to the faculty.  
 "Shouldst that I will zap him here or zap him  
 there?" saith Rod.  
 "Oh surely, to zap him *there* will impress him  
 mostly!"  
 "Smilest thou, ungrateful freshman," crieth  
 Peter,  
 "How willst it look in the photo if thou frow-  
 nest?"

And thenst, it did appear that something was  
 amiss with Tappy's chariot,  
 A handle, a piston, or a gear was out of plumb.  
 Thusly, a new one did he buy,  
 One of those newtangled horseless things,  
 With speed, and wheels and piston rings.  
 But now the end approacheth,  
 Will the mighty Lord in judgement sit,  
 And strike the mighty blow-

"Set this half free,  
 And let the others go".

Now, for thy attendance through that lot,  
 We list, in order of appearance, the players of  
 this plot.

Ross D.	He worketh hard, but didst take a spell To order beers at Steve's, upon his twenty-first.
Lyn H.	He surpriseth with a fastly con in Maths, But ended with a fastly un-con too.
Peter L.	A chimney by any other name, For he doth not have any other call to fame.
Chris L.	Seminar defereth, thesis lately, why, Should he not have exams deferred too?
Joe L.	The Sorcerer's Apprentice. But his magic Were not found as strong as his master's.
Doug M.	"Don't peereth such at me, I haven't done any work yet!"
George M.	What possesseth this man? He chose but Maths 35 for his option.
Rod P.	"What! Me understandeth! I'll have you know, That should I not study, I should fail!"
Peter S.	A hardy stayer, this lad. Has proved That an undergraduate career can be fun too.
Laurie S.	Driveth a hot blue chariot, er, Anglia, Could outpace Fangio in any test.
Russell S.	Russel hath proved a mighty sinner, For he did 'chuck' the best part of the dinner!
Frank T.	A true example of oriental charm, His list of birds is longer than your arm.
Brian Z.	Oh lastly, but not leastly, So, to Brian, we shall not be beastly.



*T. Riley, T. McMath, D. Coulter, C. Poynton, J. Struthers, J. Noonan, G. Barrett.*

*K. Loke, B. Chia, A. Scott, J. Sturman, G. Marsh, T.K. Ung, S. Yeap, L. Scott.*

*Dr. J. Wager, Mr. J. Blair, Dr. O. Hancock, Mr. G. Lutz, Prof. D. Allen-Williams, Mr. R. Minchin, Mr. R. Johnston, Mr. M. Widden, Mr. J. Appleyard.*

#### FOURTH YEAR MECHANICAL

Waal! After our last very exciting year, and two veterans who were going to do another lap, we achieved the record pass rate of 115% Presented below, dear reader, are the intriguing biographies of the members of the fourth Year Car Club.

##### *Yeap Seang Huat*

Chief driver in the Asian racing team. Well groomed dark hair gives him away as the Phantom Agent representative. Gets put on the end of every list. That's Y we put him first.

##### *Corbett Poynton*

Was the first one to go! In contrast to last year's coat and tie image, he now always appears with his hair ruffled. Since June his absence has also been noticed at rowing and drinking bouts. His next vehicle is tipped to be a late model perambulator.

##### *Greg Marsh*

Spends a lot of time in his well equipped wagon. Still not satisfied after having rebuilt it nine times and added extras and kitchen sinks, is now investigating water injection for more zoom. Has had a hand in many great cartoons, also an authority on Chickenman.

##### *Dave Coulter*

Heard that he got his sporty model from a Japanese car dump. After test driving the Nullabor last Christmas, plans to revolutionise car design with his rocket powered broom balancer.

##### *Tom "Grand Priz" McMath*

Dresses the part with scarf, leather jacket and dark glasses. Despite previous experience still doesn't believe in a nine o'clock start.



*Lindsay "Caltex" Scott*

Our chief time-keeper - he erupts into smoke in a usually vain attempt to shorten our hour long lectures. Gained practical experience pumping gas to finance his mid-weekly drive-ins.

*Jeff "Repcor" Sturman*

Works too hard, and so to compensate drives too slow. Assumes he will remedy the defect with cooling fins. Despite the Prefect's solid wheels he likes to be our spokes-man.

*Gavin "Greenlight" Barrett*

Rushes in and out between his other faculty units to do a bit of engines. Has a singularly unattractive and noisy car and an amazing sense of humour. Typical G-boy joke "Hear about the two cement mixers that were married, pretty soon they had a little path running around the house".

*Kim Loke*

This bloke was usually Lokated in the library. Not very Lokquacious but always sports a happy smile despite the Lokal language problem. He flatted nearby and did not tyre from walking to Uni.

*Tea Krui Ung*

Sold his Austin in 1st term because of mechanical difficulties and spent the rest of the year looking for a car with a Novikov gear box. Has combined with Greenlight to develop the Barrett-Ung or "Bung" electric car.

*Tim Riley*

Our main prize winner, always first across the line with assignments and reports. Asked intelligent questions all year. Often sighted in nippy red Viva with fast blonde at his side.

*John Struthers*

Quiet man with a quiet car. Once thought to be the great abstainer (alcohol and nicotine etc). It whispered that he has found another vice.

*Barry Chia*

The handsome happy-go-lucky, Kingswood man of mystery. Showed prowess at tennis and was a cartoonist of note. Talks like Peter Sellars imitating an Asian.

*Tony Scott*

Has signed up to tackle the Puckapunyal circuit next year. Often seen lunching in a red VW. with a magic Genie. Denies he will be the next entrant in the marriage handicap. Would no sooner think of starting the day without Chickenman than passing the morning without playlunch.

*John Noonan*

Drove the class car, often mistaken for a Rolls. Tipped to make his fortune either in the oil game or selling the Noonamatic Universal manufacturing machine. Was very generous in sharing his playlunch with a starving college-man. Could be second to go.

## THE LAST WORD

Good luck to those who finish the course, and may they wallow in honour, glory and money for the rest of their days.

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## WHERE HAVE ALL THE BEAUTIES GONE?

The above question loomed large in the mind of the Non Loqui Editor that night, as he tried to remember the names and occupations of the June 1968 Mechanical graduates. He had seen none of them since that fateful day when the results finally came out. Most had apparently set out for parts unknown, or Steve's, or both, as soon as it was announced that no-one had failed, not even MacKinlay.

Next day, as he moved about the building, the Editor espied one of the long lost graduates lurking in a room significantly numbered 007, and asked him what had happened to all his mates. And this is the tale the Editor heard that day.

Denton Bocking, winner of a flying scholarship, had departed in a shower of kisses, beer and relatives for the east of Australia, only to be cornered and banished to the salt mines of the Weapons Research Establishment in S.A. Chang Kok Foo and Valentine Ng had both





*R. Gunn, R. Watkins, A. Reith, R. Waring, M. Want, D. Bocking, F. Shier*

*P. Nicholson, P. Hopwood, V. Ng, K. Peh, Chang Kok Foo, R. Oehlers, D. Mackinlay.*

*Dr. J. Wager, Mr. J. Blair, Dr. P. Hancock, Mr. G. Lutz, Prof. Allen-Williams,  
Mr. R. Minchin, Mr. R. Johnston, Mr. M. Widden, Mr. J. Appleyard*

tied respective nuptial knots, and Val had proceeded to leave Australia for parts unknown-Sabah.

Ross Waring had been showing a keen interest in psychiatry by working at Claremont Hospital, ostensibly on the plumbing. Most of his time, however, is spent wheeling and dealing for the P.W.D. Mark Want, originally on a Cadetship, decided to buy his way out and had gone to work for C.S.B.P.

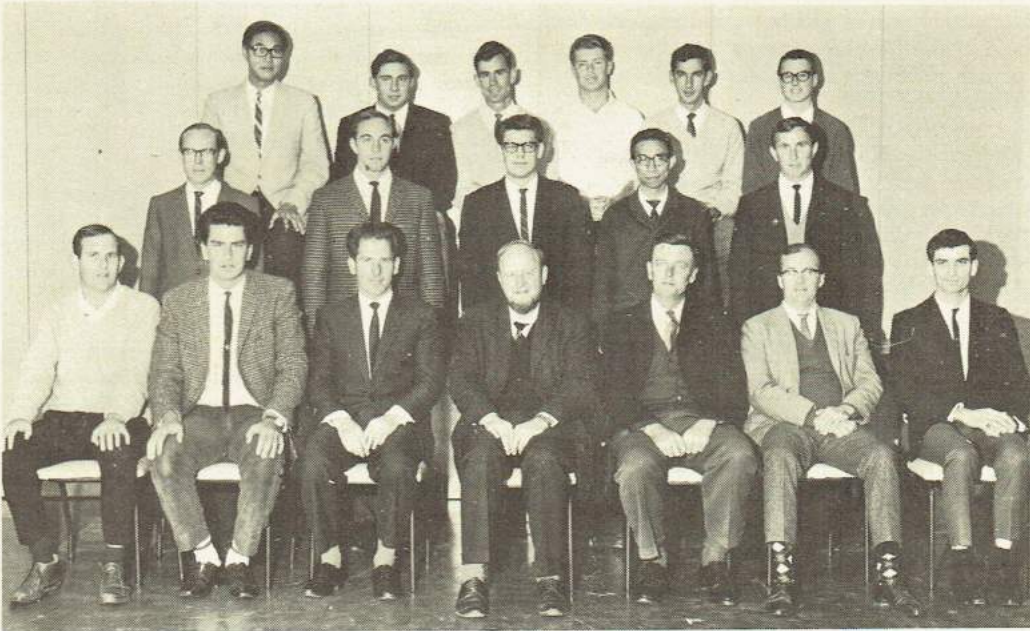
A number of the Mechanicals had gone into the War Game. Fred Shier had gone to Victoria to produce 7.62 mm ball with tender loving care. Alan Reith, called up and healthy, was repairing Mirages, Macchis, and eventually F111s, which Peter Nicholson, pilot extraordinary will probably be flying. Rumour has it that Jimmy Peh had gone into the forces of his own country, and that Ray Watkins was also in Victoria making weapons.

Two of the Mechs decided that they were too slack to start working for a cruel employer, and had both embarked on post-graduate careers. Bob Gunn had left WA and a bird to study at the Atomic Energy Commission Establishment in Sydney, and Peter Hopwood was still around, mainly as Chief Dismantler of Villiers Engines. The other Mech to remain on Campus, although not in the Department, is of course Dave MacKinlay, who continued to administer teeming thousands of horrible undergraduates. Rod Oehlers had packed up his slide rule and his wife and gone to Sydney, never to be seen again.

As soon as this terrible tale of woe and begotten had been told, the Editor, fighting back tears retired to his cave to meditate, while the 007 lurker, overwhelmed with grief, wandered off to Steve's to drown his sorrows-the cad.

**P. Hopwood**





*A. Chintakananda, J. Della-Bosca, R. O'Donoghue, J. Leivers, D. Winslade, M. Richards.*

*T. Fuller, E. Cygler, T. Kings-Lynne, W.L. Yuen, M. Matassa.*

*J. McCarter, Mr. R.A. Jarvis, Mr. A. Scolaro, Prof. A. Billings, Dr. J. Bundell, Dr. D. Seven, A. Cantoni.*

## FIFTH YEAR ELECTRICAL

### TONY CANTONI

Recuperating in Italy after a smashing performance at the dinner. This idol of the 5th years plans to do a Ph. D. to further his brilliant academic career.

### ASVIN CHINTAKANANDA

Rumour has it that he has gone back into hiding in Thailand under a marital status. Possibly plans to return to dabble in a Commerce degree.

### ED CYGLER

Left College after 4½ years to move into the flat of ill fame. A devoted temporary employee of the P.W.D. designing a leprosarium for Derby. Plans to attempt a computing course next year.

### JOHN DELLA BOSCA

(Desert Boots). Has too much to handle with E.L.S.K.A. ans was driven to phantom study in the last term. Believed to be seeking refuge in the big smoke with Honeywell. (E.L.S.K.A.: Extremely Large Size Knorkers 'Anging.)

### TERRY FULLER

Has overcome P.M.G. transfer to Albany by taking one step closer to matrimony via engagement to Laurel. Still finds time in between his travels to and from Albany to indulge in a little fishing.

### TERRY KINGS-LYNNE

(Ring). Down with Epiditimitis after a debaucherous show at Doubleview. Sent to Kununurra by the P.W.D. after his bomb-out from the strenuous honours course. Finding his cure for asthma at Steve's.

### GEOFF LEIVERS

Spends his time transplanting blackboy's for W.M.C. Still finds it hard to break his old habit of attending the Reid Library after indulging at Steve's.

### JOHN McCARTER

Looking for earth faults with the P.M.G. Known to have found a few at Steve's and his fiancée still plans to marry him even though he is still uncertain about further study next year.

#### MARIO MATASSA

The dark horse is still in a good position for a place in the Marriage Stakes. Still finds time to peruse through the library after a days work with the P.M.G.

#### DICK O'DONOGHUE

(Richard the King Conner) Felt the pangs of separation during a trip to England. Now making paper planes for D.C.A. Finds it safer to park with his bird on Mounts Bay Road rather than risk peak hour traffic.

#### TEO HENG LAM

Winding coils with Westralian Transformers. Planning to do Computing in 1969. Still seen in the library.

#### MACK RICHARDS

On point duty with the P.M.G. Telephone Traffic while marking time before entering the Dept. of National Service (Nashos). More interested in playing with radio controlled boats and Arts students than his honours course.

#### ALBERT YUEN

Still remains anonymous though proved to be compulsive card player on the Gledden Tour. (Any game, any rules, any time). One of the few with an honours pass. He now spends his days at A.I.S. Kwinana.

#### DICK WINSLADE

After missing out in W.A. plans to try harder on the French Riviera while en route to England to tackle a Master's. Almost drowned off Rottneest while emulating sailors with a boat full of birds.

One small comment that must not be omitted is that the seven Electricals acquitted themselves with such control on the Gledden Tour that they won the coveted Gledden Glug. And so ends the saga of the fifth year Electricals, this small band being the very last to complete a five year course.

## TO WHOM IT MAY CONCERN

**S**ometimes when you're feeling important,  
Sometimes when your ego's in bloom,  
Sometimes when you take it for granted,  
You're the best qualified in the room,  
Sometimes when you feel that your going  
Would leave an unfillable hole,  
Just follow this simple instruction,  
And see how it humbles your soul.

Take a bucket and fill it with water,  
Put your hand in it up to the wrist,  
Pull it out and the hole just remaining,  
Is a measure of how you'll be missed.  
You may splash all you please when you enter,  
You can store up the water galore,  
But stop and you'll find in a minute,  
That it looks quite the same as before.

The moral of this quaint example,  
Is just do the best you can,  
Be proud of yourself, but remember,  
There is no indispensable man.

Source unknown.





*B. Tang, D. Sylwestrzak, D. Fitzpatrick, B. Carlton*

*J. Okis, M. Taylor, J. Wall, P. Frieze, G. Watson, R. Male, R. Lee*

*K. Walter, K. Sobejko, R. Smailes, D. Gardner, P. Scott, G. Martin, J. Gill.  
Mr. H. Craddock, Dr. B. Clegg, Dr. C. Massey, Prof. K. Cooper, Mr. B. Smith  
Mr. J.H. Matthews, Mr. R. Hebbert.*

### FIFTH YEAR CIVIL

Where have all those Civils gone  
 Long time passing?  
 Where have all those Civils gone  
 Long time ago?  
 Where have all those Civils gone?  
 Gone to 'Steve's', yes ev'ry one  
 When will they ever learn,  
 When will they ever learn?

# STUDENTS 1968

## First Year

Abbot G.B.  
 Adams J.C.  
 Amin S.  
 Andruszkiw P.  
 Appelt M.A.  
 Armstrong A.D.  
 Atkinson R.G.  
 Aw Soo  
 Baker K.J.  
 Barrett J.A.  
 Bassula J.R.  
 Batty J.H.  
 Becu R.D.  
 Blennerhassett P.J.  
 Booth C.A.  
 Budisuwito K.  
 Burr M.J.  
 Burton B.W.  
 Caldwell R.T.  
 Canaway P.  
 Candy R.I.  
 Carpenter R.J.  
 Challenor H.A.  
 Chan F.K.  
 Chan J.P.K.  
 Chan T.Y.  
 Ghang A.K.S.  
 Cherry B.D.  
 Chin E.W.Y.  
 Choong T.C.  
 Chou S.W.  
 Cinquina N.  
 Collett J.L.  
 Collins K.D.  
 Constantine R.A.  
 Gook G.  
 Gordin P.G.  
 Cox J.R.  
 Crawford D.I.  
 Crisafulli C.W.  
 Crosby H.J.  
 D'Aseano A.  
 Davies D.F.  
 Dunstan R.J.  
 Eattell J.P.  
 Eddington R.I.  
 Edwards G.T.  
 Edwards W.J.  
 Englund E.A.  
 Evans M.J.  
 Fam T.C.G.

Farrell R.G.  
 Formato A.  
 Foster S.G.  
 Fouracres T.J.  
 Georgakakos G.  
 Gill T.S.  
 Gillett J.P.  
 Ginandjar P.  
 Gobolos A.Y.  
 Goh C.A.  
 Goh C.H.  
 Golowyn G.K.  
 Gorham G.R.  
 Graham S.  
 Greenwood J.M.  
 Grey P.T.  
 Hale R.W.  
 Halvorsen S.M.  
 Hanafiah A.C.  
 Hawken P.J.  
 Healey E.J.  
 Hohnen D.J.  
 Howe R.J.  
 Hunt G.F.  
 Jachja D.  
 Johnson R.  
 Kan T.S.  
 Kessell G.D.  
 Khio S.  
 Knox P.R.  
 Kudrynskyj S.  
 Kwan C.Y.W.  
 Lau H.K.  
 Lee K.H.  
 Leong T.K.J.  
 Liblich S.  
 Loh K.K.  
 Lowe S.N.  
 Lowes R.W.  
 Ly T.V.  
 Lynch K.O.  
 Mackowiak W.  
 MacPherson J.D.  
 Maloney R.J.  
 Marsal A.  
 Martin G.R.  
 Martin K.A.  
 Mason J.K.  
 McDonald R.J.  
 McKimmie B.R.

Metcalfe J.C.  
 Milne G.P.  
 Milward G.  
 Money K.F.  
 Montgomery J.C.  
 Morgan P.W.  
 Morris W.J.  
 Murphy P.M.  
 Murray R.  
 Naunton J.F.  
 Ng A.E.  
 Ng S.W.  
 Ng T.H.  
 Nilsen B.O.  
 Noridah I. (Miss)  
 Nuch M.  
 Ossolinski G.A.  
 Pearce D.L.  
 Penstone A.P.  
 Petherick D.M.  
 Pineira I.M.  
 Poepjes T.T.  
 Priolo A.  
 Properjohn G.E.  
 Pryce D.V.  
 Quai D.  
 Raeburn J.M.  
 Rafferty G.F.  
 Rasjid H.  
 Reed R.P.  
 Rensen J.  
 Reynolds L.  
 Roberts T.M.  
 Robinson P.B.  
 Russell P.H.  
 Rutter J.H.  
 Salleo V.P.  
 Sallustio A.  
 Salter R.  
 Sargent P.R.  
 Schneider J.W.  
 Smith R.B.  
 Snook L.P.  
 Steele R.A.  
 Stephens A.R.  
 Stewart C.K.  
 Suppiah Kannaparan  
 Tan G.S.  
 Tan J.H.  
 Tanner F.A.  
 Tarca M.J.

Tey H.S.  
 Thompson I.R.  
 Thompson N.G.  
 Thornett T.R.  
 Thornton R.G.  
 Toffoli B.  
 Townsend D.E.  
 Trutwein A.M.  
 Tytherleigh G.S.  
 Usman A.K.  
 Uusioja J.  
 Van De Ruit R.  
 Wachtel L.A.  
 Wahab H.  
 Walker L.D.  
 Walker R.S.  
 Walters M.O.  
 Wasser P.  
 Waugh P.J.  
 Webber N.I.  
 Williams C.G.  
 Williams R.  
 Wilson I.G.  
 Wong W.L.  
 Wong W.C.  
 Yates D.  
 Yeates R.A.  
 Yee C.L.  
 Young N.W.

## Second Year

Allan D.E.  
 Ang K.L.  
 Banyard R.E.  
 Barker F.D.  
 Basuki J.  
 Blackborrow J.  
 Bryant F.J.  
 Burke A.J.  
 Burton C.W.  
 Caro J.C.  
 Chan K.E.  
 Chia K.W.  
 Chiiniah Manohara  
 Chong K.P.  
 Christou J.V.  
 Clarke R.K. (miss)



Cliff M.L.  
 Cock G.C.  
 Condipodero C.A.  
 Crooks L.W.  
 Croy M.W.  
 Cwiek V.  
 David D.J.  
 Davies L.M.  
 Djohan E.K.  
 Douglas B.M.  
 Dowling M.E.  
 Drakes C.J.  
 Edwards D.L. (Miss)  
 Edwards G.  
 Elderfield G.P.  
 Faigenbaum D.  
 Fitzhardinge C.B.  
 Fok W.C.  
 Foong K.K.  
 Glenister D.J.  
 Griffiths R.W.  
 Hackmann A.H.  
 Hall G.L.  
 Hammer R.W.  
 Harvey R.A.  
 Harvey T.S.  
 Hasbullah M.  
 Herd D.B.  
 Hesford G.A.  
 Hewett J.D.  
 Hoffman L.S.  
 Humphries D.N.  
 Hutton I.M.  
 Jayasuriya A.M.  
 Jensen E.B.  
 Jones K.P.  
 Kay A.  
 Kelly D.W.  
 Koh H.K.  
 Koh K.E.  
 Leonhardt R.P.  
 Loughton B.J.  
 MacDonald D.G.  
 Maluish A.G.  
 Margetts L.F.  
 Massey J.B.  
 Moriarty M.J.  
 Nadebaum P.J.  
 O'Brian T.A.  
 O'Connell D.  
 O'Leary B.K.  
 Paterson P.J.  
 Pollett C.G.  
 Quinn R.J.  
 Raymond D.J.  
 Rho L.A.  
 Richards C.C.  
 Robertson J.J.  
 Sallustio N.  
 Simpson G.P.  
 Spence R.E.  
 Taylor B.R.  
 Treesuwan S.  
 Turner R.F.

Van Der Linden A.H.  
 Wade S.N.  
 Wyche P.J.  
 Yeo C.T.  
 Zekas L.

### Electrical

Allen J.A.  
 Andersen R.L.  
 Bagworth G.J.  
 Basell M.C.  
 Bennett E.V.  
 Chi J.R.  
 Coleman A.K.  
 Ferrero G.T.  
 Fung T.B.  
 Gavranich B.B.  
 Gilbert M.J.  
 Haime A.L.  
 Harvey K.F.  
 Kitchin B.J.  
 Leung T.H.  
 Luciani L.E.  
 Nicolson D.C.  
 Parker I.W.  
 Prosser C.J.  
 Ryan J.D.  
 Samad R.B.  
 Soong K.M.  
 Stacey A.O.  
 Stojanovic M.  
 Subrato W.  
 Tan A.S.  
 Tan W.S.  
 Tay C.N.  
 Tham C.K.  
 Thorn Y.F. (Miss)  
 Threlfall H.J.  
 Waddilove J.N.  
 Winkler F.R.

### Third Year

#### Civil

Bennett B.L.  
 Brearley P.M.  
 Cheong C.K.  
 Combs W.F.  
 Cousins D.F.  
 Crow J.G.  
 Dimond R.M.  
 Filippi U.  
 Forrest K.J.  
 Grieve R.B.  
 Hambleton T.C.  
 Henfrey P.E.  
 Ho U.C.  
 Hoey G.A.  
 Humphry T.R.  
 Kidd B.L.  
 Liaw A.H.  
 Low C.W.  
 Lowe G.P.  
 Macartney J.A.

Mok T.F.  
 Naismith M.A.  
 Neish A.J.  
 Nguitragool C.  
 Rapley D.N.  
 Smith A.G.  
 Teh J.K.  
 Thum C.H.  
 Van Der Meer A.T.  
 Van Der Meer J.J.  
 Warnock D.  
 Yorath J.L.

### Electrical

Ali A.L.  
 Beale J.S.  
 Campbell R.A.  
 Chang C.L.  
 Chua C.T.  
 Chuong N.V.  
 Cook M.D.  
 Di Camillo J.G.  
 Gazia C.R.  
 Hai P.T.C. (Miss)  
 Hume G.D.  
 Johansen E.  
 Kangsanant T.  
 Koenig A.A.H.  
 Lee Y.J.  
 McBean D.J.  
 Mak W.L.  
 Mok A.C.F.  
 Morgan P.D.  
 Ng F.K.C.  
 Ng S.S.  
 Ng Y.M.  
 Phiet D.Q.  
 Pooi C.K.  
 Power V.F.  
 Quek P.H.  
 Truong P.T.  
 Turner R.J.  
 Varley B.E.C.  
 Vu L.A.  
 Watanarada T.  
 Weijers A.J.  
**Mechanical**  
 Anderson J.  
 Ban D.D.  
 Beer K.J.  
 Binckes G.K.  
 Blaquierre A.H.  
 Dobson S.G.  
 Downie B.F.  
 Goon K.P.  
 Hemsley P.A.  
 Kiet A.T.  
 Lau M.T.  
 Lim S.K.  
 Sayer C.N.  
 Tang C.N.  
 Tinh V.V.  
 Trevelyan J.P.  
 Wiriyacosol S.

### Fourth Year

#### Civil

Acalinovich, V.A.  
 Bromell J.M.  
 Burvill A.D.  
 Colledge K.G.  
 De Rossi A.F.  
 Eastlake P.J.  
 Giumelli J.R.  
 Henneveld, M.  
 Hough D.G.  
 Lantzke, R.T.  
 McGuire P.J.  
 Mauger, G.W.  
 Metcalf L.L.  
 Morrison I.J.  
 Moyle A.L.  
 Ong S.C.  
 Renton R.J.  
 Sanderson P.F.  
 Ventriess H.B.

### Electrical

Dillon R.  
 Hebiton L.J.  
 Lawrence P.J.  
 Lewis, C.A.  
 Lorenti J.D.  
 Milosz G.R.  
 Myers D.G.  
 Perry R.R.  
 Schoonens P.C.  
 Seddon L.N.  
 Stephenson R.G.  
 Tung Shiu Leung  
 Zec B.N.

### Mechanical

Barrett A.G.  
 Chia C.H.  
 Coulter D.N.  
 Loke K.W.  
 Marsh G.J.  
 McMath T.W.  
 Noonan J.E.  
 Poynton C.J.  
 Riley T.W.  
 Scott A.J.  
 Scott L.J.  
 Struthers J.L.  
 Sturman J.J.  
 Ung T.K.  
 Yeap S.H.

# GRADUATES

## Civil

Carlton W.G.  
Fitzpatrick M.D.  
Frieze P.A.  
Gardner D.E.  
Gill J.I.  
Lee R.W.G.  
Male R.  
Martin G.S.  
Okis J.  
Rozlapa A.  
Scott P.E.  
Smailes R.J.  
Sobejko K.S.  
Sylwestrzak D.A.  
Tang B.K.  
Taylor M.R.  
Wall J.A.  
Waller J.R.  
Watson G.R.

## Electrical

Cantoni A.  
Chintakananda A.  
Cyglef E.  
Della Bosca J.C.  
Fuller T.A.  
Kings-Lynne T.A.  
Leivers G.  
Mattassa M.  
McCarter J.C.  
O'Donoghue R.M.  
Richards B.M.  
Teo Heng Lam  
Winslade R.J.  
Yuen Wai Ling

## Mechanical

Bocking D.M.  
Chang K.F.  
Gunn R.I.  
Hopwood P.F.  
MacKinlay D.B.  
Ng M.W.  
Nicholson P.G.  
Oehlers R.R.  
Peh K.C.  
Reith A.D.  
Shier F.W.  
Want F.M.  
Waring R.  
Watkins R.G.





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